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AMERICAN FRUIT GROWER



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EVERYONE knows food is important, but when we must feed our armed forces, our home army and people of other nations, we realize just how vital food really is.

Americans have the resources and skill to meet this need but they have tough problems to overcome. Problems like the enormous 3-billion-dollar damage caused by insects and plant diseases each year.

Proven products like "Grasselli" and "NuRexform" lead arsenate and "Sulforon"

wettable sulfur will help growers produce more food by cutting down crop losses. These products are easy to mix and apply and are effective in results.

See your du Pont dealer now for spraying and dusting materials. Early planning will help everyone to get needed products for crop protection.

E. I. du Pont de Nemours & Co. (Inc.), Grasselli Chemicals Department, Wilmington, Delaware.

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Education... and more. The film story of du Pont Pest Control Research in color and sound. A trip through one of the most unusual laboratories of its kind in the world. Write for descriptive folder. 2504 Nemours Building, Wilmington, Del.



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"NUREXFORM" Lead Arsenate	Urea Sulfur	Pink Grass	"BLACK LEM" "100"
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"SULFORON" Wettable Sulfur	Spray Oil	Flintless Teller Paste	"PARAPONT" Parathionchloride
"DUSTON" Flowing Insecticide	Copper Sulfate	Barkman White	Zinc Sulfate—Flake
Residual Sprayer	Sulfur	"BLACK LEM" "40"	"PARAPONT" Barium Chloride
"DUSTON" Contact Insecticide			Exports (prescribed)

PLAN YOUR VICTORY GARDEN NOW RAISE MORE FOOD—AND SAVE IT ALL!



FOR YOUR FAMILY—FOR YOUR COUNTRY

FOOD is being rationed in the land of plenty! America is at war, and FOOD is a weapon as powerful as all our planes and battleships. If FOOD fails, we cannot win the peace.

This year farm production will be strained to the utmost, but farm fields alone cannot produce enough food to meet the nation's needs in 1943.

This year that great American institution—the family garden—will come back into its own. Millions of Victory Gardens will yield a vast store of vegetables and fruits, and Uncle Sam will give his blessing to each and every one. Home-grown health and energy will supply the tables all summer and stock the pantry shelves against the winter. Millions of tons of precious food will be released for shipment to our Armed Forces and to supply the vital needs of

our fighting allies on the battle fronts.

The Victory Garden Program, sponsored by the Department of Agriculture and the Office of Civilian Defense, can make all the difference between war and Peace!

Have a Victory Garden this year and make plans for it *now*. It will take planning, and it will mean extra work for your busy household, but there will be big rewards in health and in profits. You will be thankful in summer to have fresh vegetables each day for the family table—and *doubly thankful* next winter to have abundant food when the markets are bare of canned goods.

Plan a *big* garden. If you had one last year, don't be afraid to *double* your acreage. Remember it's for Victory in a year of scarcity! Plan the long rows that are quickly cultivated with other

farm crops, and see that the soil is made fertile and rich. Plan your way through the picking and harvesting, the canning and preserving, the disposal of your surplus crops. Plan to *share* your garden—*both the work and the yield*—with families in town who have no room for gardens. And buy a War Bond with Victory Garden profit!

Start things right now, by filling out the coupon below and send for Harvester's garden booklet. It's a dandy. Yours for Victory—INTERNATIONAL HARVESTER COMPANY.

INTERNATIONAL HARVESTER COMPANY
180 North Michigan Avenue, Chicago, Ill.
I'm going to "Have a Victory Garden."
Please send the booklet to

Name _____
Address _____
City _____ State _____

INTERNATIONAL HARVESTER

AMERICAN FRUIT GROWER



E. G. K. MEISTER, Publisher

LABOR BATTALIONS

A SECOND front is being planned, not in Europe alone, but on the farms and in the orchards of America. This second front will be a "labor front." The forces will consist of soldiers, women and school children, according to the plans of Secretary of Agriculture Wickard. The job on this second front will be to help grow and harvest the food necessary to win the war.

Fruit growers faced labor shortages last season. In the coming season the shortages may be even greater, at least in some sections of the country. The recent rulings concerning selective service designed to release men for farm work may, like many another war measure, provide too little, too late. It is to meet these labor shortages that Secretary Wickard is organizing an army of women and school children and, in some cases, soldiers to march to the relief of farmers and fruit growers in need of help.

In some sections last season fruit growers enlisted the aid of women and school children at harvest time. The results were not always satisfactory. Fruit picking and handling required experience if damage to fruit and trees is to be avoided.

In the coming season—our second year at war—labor conditions may be so drastic that growers will have to welcome women and children in their orchards if fruit crops are to be harvested on time. If this proves to be the case, we urge cooperation with Secretary Wickard in his efforts to provide a "second front" of farm and orchard labor, instead of sniping criticism.

There is a war to be won, and fruit is a food too vital to Victory for growers to get out of step with any plan or program aimed at helping to win the war.



PAY YOUR DEBTS

IN THE majority of cases, fruit growers made money last year. And the indications are they will make money again this year. Therefore, it will be well for each one to read and ponder a statement made by H. C. M. Case, Head of Agricultural Economics, Illinois College of Agriculture, as follows:

"Farmers will be tempted to overexpand their operations and investments in response to high prices, but nothing is more important to the farmer than careful financial planning, especially the farmer burdened with mortgages and other financial obligations. Farmers free of indebtedness with money to invest may still make some wise investments but should avoid heavy obligations."

In other words, prepare for peace by paying your debts now, for who knows what peace, much as it is to be desired, may bring in the form of economic pressure.



DON'T DELAY

IS your tractor in good operating condition? Is your spray machine ready? If they need repair parts, have you ordered them? If not, don't delay. Do it now.

Uncle Sam has provided repairs for fruit growing machinery. He has even loosened up the restrictions on the manufacture of new equipment. It takes time, however, to untangle the red tape involved in changes made in priorities. Before new equipment is available you may have to repair and use your present machines for another season. If such is the case, order repair parts at once to give your machinery dealer time to get them for you.

Don't delay!

MARCH, 1943

AMERICAN FRUIT GROWER

FOR VICTORY



BUY UNITED STATES WAR BONDS AND STAMPS

"MY COUNTRY, 'TIS OF THEE"

AN allotment of critical materials for farm machinery for the second quarter of 1943 at the full rate recommended by Secretary of Agriculture, Claude R. Wickard, to carry out the 1943 program was recently authorized by the WPB.

All materials carry the top priority rating of AA-1 which normally is given only to the principal needs of the military program.

As a result of this action, manufacture of new farm machinery will be possible at a rate of 40 per cent of 1940 production. Production of repair parts will be maintained at the rate of 167 per cent of the 1940 figure.



THE United States Department of Agriculture has announced that appeals from rationing orders administered by the Director of Food Production may be made through a simplified and uniform procedure. This is available to persons who feel that they have suffered undue hardships under rationing orders and who cannot obtain relief through the regular channels.

Persons seeking relief must file a written statement, containing reasons why relief is sought, with the Director of Food Production, Washington, D. C.

At this time only farm machinery is being rationed through the Food Production Administration.



NO less than 18,500 farmers and fruit growers were killed in farm accidents last year and it is estimated that approximately 100 more were in-

(Continued on next page)

PAGE 5

NATIONWIDE NEWS

(Continued from preceding page)

jured for every one killed. Hazards are greater now with new help, and greater care should be exercised to avoid accidents with tractors and other farm equipment.



THE allocation of dried fruits has been transferred by the Secretary of Agriculture from the administration of the War Production Board to the Food Distribution Administration.

The transfer became effective January 30, but disposition of dried fruits continues in effect under the same regulations. It provides that each packer set aside for Government purchase his entire supply of raisins, dried apples, apricots, peaches, pears, and prunes. As in the WPB set-up, provision is made for releasing quantities of these dried fruits to the civilian trade.



FOOD and nutrition research for the armed forces, as well as for civilians, will be correlated under new cooperative arrangements whereby basic food research needed by the Quartermaster Corps of the Army, and the Bureau of Supplies and Accounts of the Navy, will be conducted by the Agricultural Research Administration.

The new arrangements are the outcome of conferences recently held by Rear Admiral W. J. Carter and Colonel G. F. Doriot with Agricultural Research Administrator E. C. Auchter.

Two consulting committees have been appointed, in collaboration with the Quartermaster Corps and the Bureau of Supplies and Accounts, to cooperate and advise with Dr. Auchter on food research problems. One consists of outstanding experts on nutrition, the other of research personnel representing the food processing industry.



ALTHOUGH March 1 was the deadline for placing orders for new equipment needed by food processors and farm equipment manufacturers, there is no deadline on orders for maintenance and repair parts. These must be governed, however, by existing preference ratings. Manufac-

turers and processors are especially urged to take measures to keep their supply of such parts at a normal level, and to place orders immediately whenever necessary to prevent their supply, measured by past use, from going below normal.



MOBILIZATION of no less than 3,500,000 workers to help farmers meet the nation's increased requirements for food, fruits and fiber this year is the aim of the Department of Agriculture's program to meet labor shortages in connection with the 1943 crops.

The program complies with the War Manpower Commission's directive assigning to the Department responsibility for procuring and placing the additional full-time and seasonal labor needed to assure that the national farm work force will be of sufficient size to handle the record output called for this year.

Under the new Selective Service deferment regulations worked out jointly by the War Manpower Commission and the Department of Agriculture, more than 350,000 farmers, fruit growers, and hired workers were deferred during the first part of this year. Deferring of such essential operators and workers registered in the draft will continue at an accelerated rate.



EFFECTIVE February 3, O.P.A. issued a revision of MPR 186 concerning prices for Western wooden agricultural containers, used in shipping and storing fruits and vegetables.

Maximum prices are established on the sale, assembly, warehousing, delivery service and extra workings of Western wooden agricultural containers. These ceilings are on a dollars and cents basis.

The definition of such containers covers "all sawn shook agricultural containers and veneer covers for such containers produced in the 'western area'" and means "any assembled or unassembled box, crate, case, tray, lug, carrier, or similar container made principally of wood, and customarily used for handling, packaging, shipping, or storing fruits and vegetables (whether fresh,

dried or canned)." The western area means California, Washington, Oregon, Idaho, Montana, Wyoming, Utah, Nevada, Arizona and New Mexico.



DOLLAR-and-cent ceilings for lead arsenate established: Dollar and cent ceilings for lead arsenate sold by manufacturers and distributors have been established by OPA.

All distributors' and manufacturers' sales of standard lead arsenate powder, standard lead arsenate paste, and basic lead arsenate powder are covered by the action. Prices for sales by retail dealers are automatically adjusted.

Under the regulation, the price manufacturers may charge for a pound of lead arsenate powder when sold to dealers in units of three-pound bags in carlot quantities is established at 11½ cents, one-half a cent per pound lower than the price most manufacturers are currently charging.

Manufacturers sell most of their products to distributors, but about 25 per cent of their sales are made to retail dealers and to large growers. The regulation establishes prices for both classes of purchasers and maintains the half cent differential between the two classes.



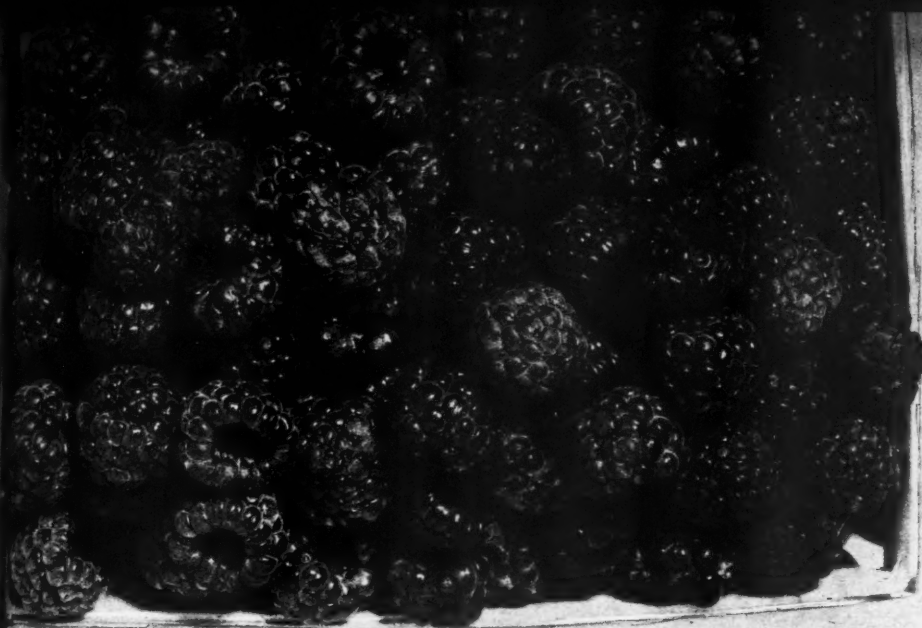
CALIFORNIA and Arizona orange handlers recently were directed to set aside each week quantities of fruit equal to one-fifth of their weekly shipments for processing into juice to supply war needs, the Department of Agriculture announced.

The directive is designed to divert sufficient quantities of fresh oranges into processing channels to enable plants to operate at capacity in the production of concentrated orange juice. War requirements for concentrated citrus juices require full operation of existing processing facilities.

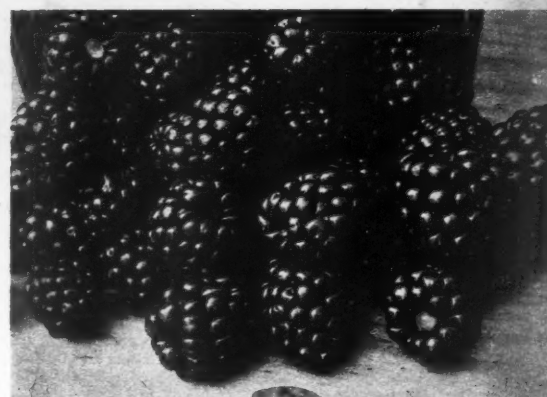
Although each California and Arizona orange handler is required each week to set aside a quantity equivalent to 20 per cent of his fresh fruits shipments, he has three alternative actions with regard to this "set aside" fruit. He may sell it immediately to processors or to any Government agency for processing; he may immediately process the fruit into juice, in accordance with existing regulations; or he may hold the fruit for a period of six weeks, after which time it is automatically released.

To insure growers and handlers of a fair price for this fruit sold to processors, the Food Distribution Administration established a price of \$50 per ton, f.o.b. packing house.

(Continued on page 31)



Left: Here is a Basket of Potomac, an extremely vigorous, hardy, purple raspberry which is especially desirable for preserves and canning.



Above: Here are Young dewberries, a rapidly growing, deliciously flavored, home garden variety for Southern and Pacific Coast States.

BUSH FRUITS DURING WARTIME

By GEORGE M. DARROW

Bureau of Plant Industry, United States Department of Agriculture

BECAUSE of the need this year for food, the production of bush fruits becomes increasingly important. Besides having especially attractive flavors that persist even when canned or made into preserves, bush fruits are also high in vitamin C.

Though the strawberry has the highest vitamin C content of the commonly grown small fruits, the raspberry, blackberry, dewberry and blueberry have about one-half to two-thirds as much of this essential element of food as the strawberry. Growers, whether home gardeners or producers for the market, will wish to use berries themselves—use them fresh, can them, preserve them, or freeze them for later use. The surplus should be sold locally or in nearby markets, if possible, to take the place of food that might have to be shipped in. Every effort to reduce the use of our transportation system for shipment of food should be made. We should adopt the "live at home" attitude as far as possible.

The raspberry, blackberry and dewberry have a vitamin C content of about 20 to 35 milligrams per 100 grams of fruit; the blueberry from 16 to 23; the black currant, grown extensively in England and to some extent in Canada, 200 to 300; the red currant 25 to 45; and the gooseberry 15 to 75 for fully ripe fruit. Even the cooked berries have a relatively high vitamin C content. According to investigations, the vitamin C content of canned raspberries was 24.9 and 31.5 milligrams per 100 grams of fruit, red currant jam 13, and of canned gooseberries 17.8 to 28.5. These values can be compared

with 30 to 70 milligrams for fresh oranges and 35 to 85 milligrams for fresh strawberries. Fruit growers should know these food values of their crops.

If supplies of strawberries and bush fruits are to be maintained, berry growers should so care for their plantings in 1943 as to produce not only maximum crops in 1943, but also to maintain healthy, vigorous plants to produce fruits in 1944 and 1945. The last census report gave the acreage of bush fruits as follows: Raspberries, 59,049 acres with a crop value of \$7,416,280; blackberries and dewberries, 34,995 acres with a crop value of \$3,761,024; currants, 2,300 acres with a crop value of \$334,723; and gooseberries, 926 acres with a crop value of \$83,163. There are some 4,000 acres of cultivated blueberries with a crop value of about \$1,000,000.

The total of some 100,000 acres of bush fruits can produce a lot of food. Moreover, home garden small fruits produce a lot more. Besides, this cultivated acreage, millions of dollars worth of blueberries and blackberries are harvested from native wild plants. Raspberries and blackberries, made into jam, can furnish our civilian and military population with one of the best and most widely used "spreads." Blueberry is a favorite pie of our people. It is these food crops for which bush-fruit growers have responsibility.

(Continued on page 13)

Shown picking at the right is a carrier made to hold a quart basket. It is suspended from the waist and is not likely to spill the berries when the picker is bending over. The filled baskets are placed in a hand carrier.

AMERICAN FRUIT GROWER



Above: These are large-fruited gooseberries. The Poorman variety is desirable for the Northeastern States, and the Pixwell for the northern Great Plains regions.





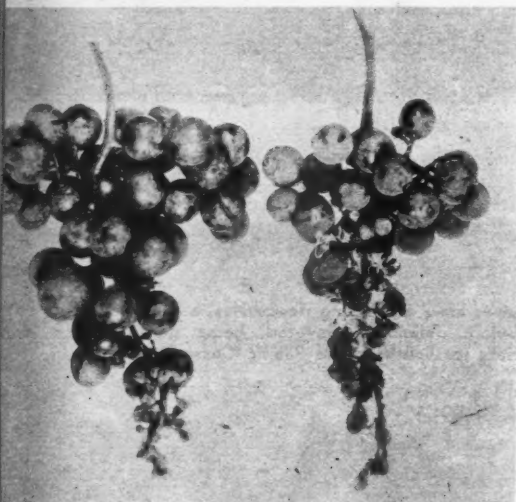
3. Bunches of grapes are destroyed by.....



2. This disease is on



1. What disease defoliated this grape vine?



4.also rots bunches of grapes.

FRUIT GROWERS QUIZ ?

Are you a quiz expert? If you know the fruit diseases, this should be easy. Each correct answer counts 10.

If your score is:

Below 50—too bad.

50-60—below par.

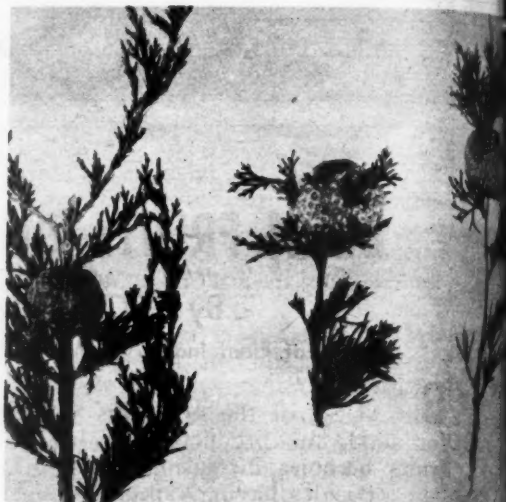
60-70—average.

70-80—Fruit Grower.

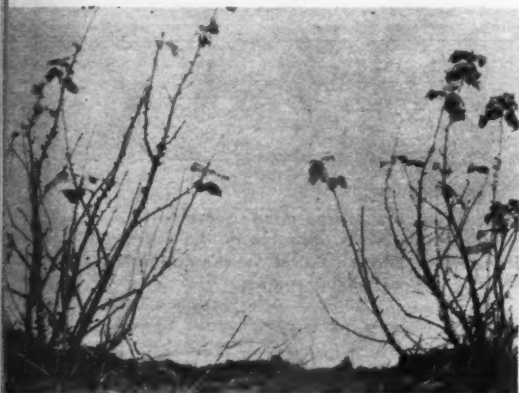
80-90—County Agricultural Agent.

Perfect Score—Quiz Kid.

ANSWERS ON PAGE 29 -



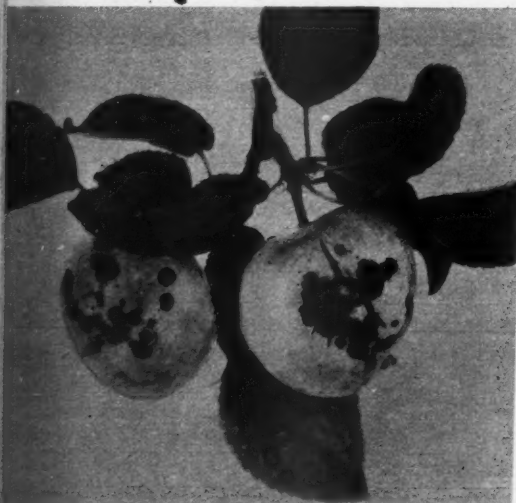
10. This disease also attacks apples.



5. These are bushes. They were defoliated by (a) scab, (b) fire blight, (c) leaf spot, (d) spur blight.



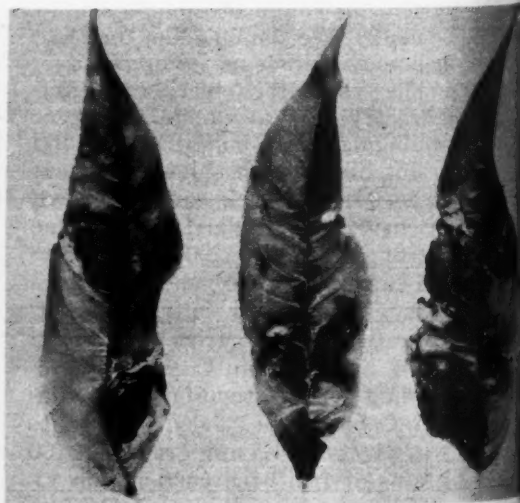
9. What is wrong with this apple leaf and fruit?



6. The apple growers' enemy.
PAGE 3

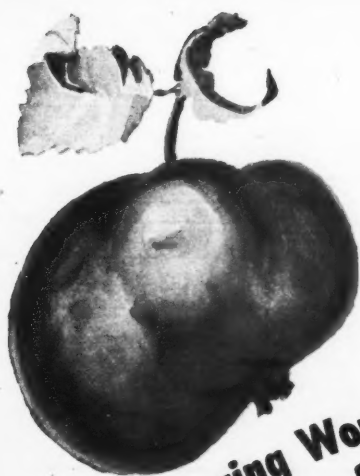


7. Cherry trees are defoliated by this disease.
AMERICAN FRUIT GROWER



8. Peach growers should know this one.
MARCH, 1943

Take a leaf from the book
of the good orchardist



Proper Spraying Would Have
Prevented the Loss of This Apple

APHIS
Destroy
Quality

"BLACK LEAF 40"

Aphids that deform fruit and foliage—leafhoppers that devitalize the leaves—red bugs, bud moths, and similar destructive pests—all these should be controlled before their attack reduces the quality of your crop and the future yields of your orchard.

Today, as when first introduced in 1910, Black Leaf 40 affords effective control with a minimum of cost—just add it to your first regular spray of lime-sulphur. Non-caustic, versatile, Black Leaf 40 has a place in orchard sprays—established by long experience.

TOBACCO BY-PRODUCTS &
CHEMICAL CORPORATION,
INCORPORATED
LOUISVILLE, KENTUCKY

**Black
Leaf
40**

4336

LOOK FOR THE LEAF ON THE PACKAGE

Interval of time between full bloom and fruit ripening of representative varieties of cherry, peach, pear, and apple for a season in which peaches bloom May 1, sweet cherries May 3, sour cherries May 9, pears May 12, and apples May 19.—Geneva, N.Y.

FORECASTING THE TIME OF

EARLY PURPLE	42				
GOVERNOR WOOD	47				
NAPOLEON	64				
MONTMORENCY	62				
ENGLISH MORELLO	70				
MIKADO	88				
GREENSBORO	91				
CARMAN	113				
ELBERTA	128				
CROSBY	142				
ELIZABETH	98				
CLAPP	116				
BARTLETT	121				
SECKEL	137				
KIEFFER	147				
EARLY HARVEST	77				
EARLY MCINTOSH	90				
OLDENBURG	98				
WEALTHY	109				
TWENTY OUNCE	122				
MCINTOSH	127				
CORTLAND	128				
DELICIOUS	132				
BEN DAVIS	136				
NORTHERN SPY	143				
		MAY	JUNE	JULY	AUGUST
					SEPTEMBER
					OCT

FRUIT HARVEST BY BLOOMING DATES

A CLOSE approximation of the date at which fruits will mature can be made at the time of full bloom. And while there is nothing new or original in the idea, the events surrounding the harvest of apples in 1942, when much pre-harvest drop occurred, has focused attention upon it. Whether the time interval method is the final answer to the problem is not so certain, but it is at least sufficiently promising to warrant a moment's attention, and Dr. M. H. Haller of the United States Department of Agriculture has recently concluded from three years of careful study with apples that the number of days from full bloom to maturity has been a more reliable index of maturity than have pressure test, ground color, seed color and starch test.

Anyone who has awaited the arrival of an heir will appreciate the uncertainties involved in any forecast of this kind, yet he is bold who would discard the doctor's charts entirely. As a matter of fact the time interval for fruits appears more nearly constant and more reliable than the commonly accepted gestation periods for mammals.

The value of the interval between full bloom and fruit ripening first attracted the writer's attention about 12 years ago when the growth of fruits of the peach and cherry was

By H. B. TUKEY

New York State Agricultural Experiment Station

being studied and a day to day growth was being charted. It was found that the charts for different seasons were remarkably similar, even though one season might be earlier and another late. In fact, when these charts (Fig. 1) for different years were held up to the light, they fitted over each other surprisingly well.

From this, a study was made of the blooming and maturing dates in the records of the New York State Agricultural Experiment Station at Geneva, New York, for 61 varieties of apples, 15 varieties of pears, 46 varieties of cherries, and 14 varieties of peaches, between 1903 and 1938 and centering mostly around 1911 to 1926. The results have emphasized the close similarity in the number of days which elapse between full bloom in spring and fruit maturity in summer and fall.

To cite the number of days for a few representative varieties at Geneva, Early Harvest requires 77 days, Oldenburg 98, McIntosh 127 and R. I. Greening 135. The Montmorency cherry requires 62 days, the Bartlett pear 121 days and the El-

berta peach 128 days. A few others are shown in Fig. 2.

The time of actual picking is, of course, dependent upon a number of very practical considerations, such as market demand, color of fruit, distance from market, availability of cold storage facilities, wind storms, sudden periods of high or low temperatures, tendency of the fruit to drop and the like. Further, picking habits vary in different sections, as for example, the custom in the Hudson River Valley a few years back was to harvest Baldwin while still small and immature in order to take advantage of the early export market, and the disposition in the Wenatchee area was to harvest Jonathan before Delicious.

Further, in some regions it has been the custom to pick fruit with reference to the calendar date, as just before or just after Labor Day. In other instances actual calendar dates can be found listed, as the picking of Stayman Winesap, October 8. The records show that this system is far less reliable than the system based on the count of the number of days between full bloom and maturity, and this applies equally well in an "early" season and a "late" one. Thus, the early McIntosh apple at Geneva usually ripens about 90 days after full bloom, and again during

(Continued on page 12)

REGARDLESS of what Arsenate of Lead you use

WE RECOMMEND THE USE OF THESE THREE PRODUCTS for Codling Moth Control . . .

*Providing it does not
contain a deflocculator
or an astringent*

S-W SPRALASTIC

- Regardless of what Arsenate of Lead you are using, providing it is standard, 98% pure Arsenate of Lead, and does not contain a deflocculator or an astringent, the use of S-W Spralastic in combination with it will result in a more uniform, heavier deposit much more effective in the control of codling moth.
- The use of S-W Spralastic actually causes three to four times more Arsenate of Lead to remain on the fruit by increasing the adhesive and spreading properties of the Arsenate of Lead particles and eliminating wasteful runoff.
- S-W Spralastic deposits a uniform heavy coating of Arsenate of Lead on the apples yet one that is easily removed in the standard washing process. In effective codling moth control you should use S-W Spralastic, the most efficient spreader ever developed.

S-W SAFE-N-LEAD

- For safety and the protection of apple foliage throughout the growing season, use S-W Safe-N-Lead to completely neutralize the water soluble arsenic found in Standard Arsenates of Lead.
- When added to Standard Arsenate of Lead in the spray tank, S-W Safe-N-Lead converts the water soluble arsenic into a stable compound which will not "burn" apple foliage, but stimulates a growth of healthy, green leaves.
- CONTRARY TO LONG ESTABLISHED BELIEF HYDRATED LIME DOES NOT PREVENT ARSENICAL INJURY TO APPLE FOLIAGE, but actually reduces the insecticidal value of Arsenate of Lead, as well as being detrimental to apple growth.
- We caution you also against the use of weak Bordeaux Mixture as a "safener" with Arsenate of Lead applied against late-brood codling moth. Weak Bordeaux Mixture will "safen" Arsenate of Lead but the danger of russetting of many varieties of apples is ever present.

S-W SUMMER MULSION

- Severe infestations of late-brood codling moth cannot be controlled with Arsenate of Lead alone but with the aid of a dependable white oil emulsion like Sherwin-Williams Summer Mulsion
- Sherwin-Williams Summer Mulsion is used with Arsenate of Lead to destroy the eggs and larva of late brood codling moth.
- S-W Summer Mulsion is not a tank mix product, but is a true oil emulsion, which breaks down when mixed with water to produce a uniform, heavy coating of oil which will not spot the apples and does not complicate the washing problem.
- A combination of S-W Summer Mulsion with Sherwin-Williams Arsenate of Lead and Spralastic is the most efficient combination that you can use in the control of late broods of codling moth.

SEND FOR FREE FOLDERS which will give you the whole story of the effectiveness of these Sherwin-Williams insecticides for maximum control of codling moth. Address Insecticide Department, The Sherwin-Williams Company, Cleveland, Ohio.

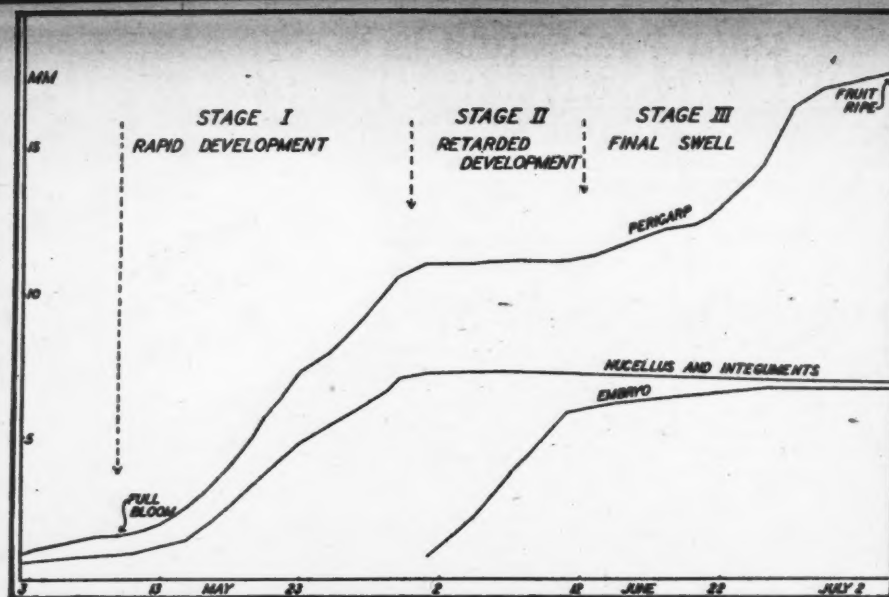


THE SHERWIN-WILLIAMS CO.

101 Prospect Ave.

Insecticide Department

Cleveland, Ohio



Day-by-date growth chart for the fruit of the sour cherry which, when compared with other charts for different seasons, shows remarkable similarity.

FORECASTING TIME OF FRUIT HARVEST BY BLOOMING DATES

(Continued from page 10)

the season of 1942 at Geneva, in spite of the season being considered "early," 90 to 91 days were required for this variety. Moreover, the records show that Bartlett pear trees blossomed 15 days earlier one season than another and the fruit ripened 17 days earlier one season than another, yet the interval of days between full bloom and fruit ripening differed only three days in the two seasons. Likewise, the English Morello cherry varied 16 days in time of bloom in two different seasons and the time of fruit maturity varied 14 days, yet the number of days elapsing between full bloom and fruit maturity differed by only two days in the two seasons.

The interval of elapsed time is more nearly constant for the apple than for the other fruits studied, followed by the pear, the peach and the cherry in that order. If any explanation is needed it may lie in the fact that the time interval from bloom to maturity is greatest with most apple varieties and least with most cherry varieties, also that the blossoming season for cherries is earlier than for apples.

Thus, it appears that even within a given class of fruits there is a greater variation in total elapsed time from bloom to fruit maturity for the early-maturing than for late-maturing varieties. Chenango, Early Harvest, Oldenburg, Excelsior and Primate vary more in elapsed time than such later-maturing varieties as Ben Davis, Deacon Jones, Northern Spy, Northwestern Greening, Roxbury, Wagener and York Imperial. Yet, here again, the difference may

be more imaginary than real. That is, over an 8-year period the Mikado peach has varied in time interval from 83 to 92 days, or nine days; while the Crosby variety for a 6-year period has varied from 135 to 142 days, or seven days. The proportionate difference in the Mikado variety is, however, greater than for the Crosby variety, and seems to accentuate the variation in the earlier ripening kind.

It is not surprising for early-maturing varieties to show greater variation than late-maturing varieties. In the first place, the earliest-maturing variety is one in which, with few exceptions, the period between full bloom and fruit maturity is shortest. Accordingly, variations from the normal temperatures which may occur for short intervals during the growing season are more likely to be reflected in the short season of early-maturing fruit, whereas they are more likely to be ironed out in a fruit having a longer period of development.

In the second place, it has been shown by Dr. Omund Lilleland in California in studies with the apricot that it is the earliest stage of fruit development which is most affected by temperature. That is, high temperatures reduced Stage I (rapid development) of apricot development from 46 days to 24 days, whereas Stages II (retarded development) and III (final swell) were shortened but little if at all. Accordingly, since Stage I is similar for the varieties in a given class whether they be early-maturing or late-maturing, and since Stage II is characteristically

short in an early-maturing variety, the effect of high and low temperatures would be more effective with the early-maturing than with the late-maturing variety.

The climate of the region alters the figures, too. Yet, in general, the elapsed intervals for Geneva, New York, agree with other data for similar varieties under somewhat similar conditions. For example, Prof. C. W. Ellenwood lists Oldenburg as having an average elapsed interval in Ohio of 92 days, Wealthy 112, and McIntosh 132, while the average elapsed intervals for Geneva have been not widely different; namely, 98 for Oldenburg, 109 for Wealthy and 127 for McIntosh. Further, Dr. J. R. Magness and his co-workers list Grimes as requiring 130 days from full bloom to fruit maturity in New York State, Jonathan 140 days, Delicious 137 days and Baldwin 145 days, as compared with 134, 134, 132 and 135 days respectively, reported here. They list Baldwin as requiring 142 days in Ohio and 136 and 146 in different seasons in Massachusetts, as compared with 135 at Geneva, New York. Dr. Haller gives the time interval for Williams as 70 days, for Jonathan 130, for Grimes 135, and for Yellow Newton 150, and Dr. D. F. Fisher of the United States Department of Agriculture gives Delicious as 145 to 150 days, Golden Delicious as 155 to 160, and Stayman as 160 days.

On the other hand, Ellenwood lists the elapsed intervals in Ohio for Grimes as 147, Jonathan as 151, Delicious as 153, Baldwin as 161, Rome as 167 and Stayman as 168, whereas at Geneva these later varieties appear shorter; namely, 134, 134, 132, 135, 140 and 145 days, respectively. It will be noted that the spread is much less in New York than in sections of longer growing seasons to the south and west.

Nor must it be assumed that the data for Geneva, New York, will apply to other sections. Drs. A. L. Rydall, Edwin Smith and W. T. Pentzer have shown that the intervals between full bloom and maturity for pears differ in different sections of the Pacific Coast. Also in the data for the apple presented by Dr. J. R. Magness and his co-workers in 1926, there are considerable differences in the elapsed interval in different parts of the country, and Prof. Ellenwood indicates a similar situation within the state of Ohio. Obviously the time of bloom, seasonal temperatures, soil moisture, sunlight, rootstock and other factors play an important part in determining how many days elapse between bloom and fruit ripening.

This, then, suggests that fruit growers might well keep their own records of blooming and harvest dates for the different fruits.

(Continued on page 14)

BUSH FRUITS IN WAR

(Continued from page 7)

This winter and spring is the time to repair trellises or stakes that support the canes, to cut out the old canes if that has not been done, to remove any weak canes, and to prune the black and purple raspberries, the blackberries and the dewberries. Carriers for picking should be repaired or made, and baskets and crates purchased as far ahead of harvest as possible. Plans should be made to cultivate the plantings early and frequently, to keep the weeds under control so that they do not get a start and thus require extra labor to remove them.

This year, especially, the planter of new or additional areas of small fruits should make preparations as long ahead of the planting season as he can. The best varieties for any section and the correct number of plants should be determined and purchased ahead of time. When received, the plants should be kept moist and cool until planted, and then planted with care.

Because bush fruits produce high-quality food that has a relatively high vitamin C content, and because under many conditions they can be brought into bearing within one or two years, plantings made this spring can commence providing food during the next three years. Thus, the vigorous Young and Boysen dewberries can produce a half to a full crop the next year after planting in the regions to which they are adapted. With early planting, in fertile soils, and with good culture, most bush fruits can produce considerable fruit during the second summer, and a good crop during the third summer, after planting. Just as with so many other crops, early and heavy production of the bush fruits is associated with vigor of the plants.

At the Food Processor's Conference in Chicago in December 1942 it was estimated that the Army and Navy in 1943 might need 261,000,000 pounds of fruit preserves. This would require some 135,000,000 pounds of fruit. The 1941 pack of frozen strawberries was reported as about 88,000,000 pounds and the 1942 pack is estimated at 62,000,000 pounds, a decrease of about 30 percent. This reduction was in part due to low prices for the fruit, in part to inability to obtain pickers at a price the grower could afford to pay, and in part to heavy rains at harvest in the Pacific Northwest. Because of the greatly reduced acreage in regions where most of the strawberries are frozen, the pack is likely to be still further reduced in 1943. Al-

(Continued on page 14)

MARCH, 1943

FRUIT PRODUCTION IS NEEDED FOR
VICTORY! SO WE'RE KEEPING
STORED FRUIT SAFE WITH

CELOTEX
REG. U. S. PAT. OFF.
INSULATION!



**This Is a Food War . . . and Your Crop
Must Be Protected to Help Win It!**

THIS IS a food war as well as a shooting war! Which means that fruit production automatically becomes "war production". You, as a fruit grower, share the national responsibility of feeding both our own fighters and workers, and the fighters and workers of our gallant allies!

There has never been a crop as important as your crop will be this year. Take steps now to put your storage in shape to protect that crop. Insulate with Celotex Vapor-seal Sheathing, and see how it simplifies "management"—simplifies control—actually makes it easy to bring your stored crop through in prime condition. *And it is not expensive.*

Lining a storage with Celotex Vapor-seal Sheathing gains three advantages to cut spoilage and help you market better fruit: (1) It guards against temperature fluctuations, (2) It permits

better humidity control, and (3) It promotes proper aeration.

Celotex Vapor-seal Sheathing is surface-impregnated with asphalt on all sides and edges for protection against moisture. It handles easily, goes up fast, stays put! It is permanently protected against termites and dry rot by the exclusive, patented Ferox Process—and it is *guaranteed in writing for the life of the building.** See your Celotex dealer now!

*This guarantee, when issued, applies only within Continental United States.

**IMPORTANT INFORMATION FREE
—SEND COUPON**

To help you and to help guard against loss of stored fruits, Celotex insulation experts have prepared literature and plans dealing with proper construction and insulation of fruit storages. This important material is FREE. Mail coupon now!

CELOTEX
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ROOFING • INSULATING BOARD
ROCK WOOL • GYPSUM WALLBOARD
LATH • PLASTER

THE CELOTEX CORPORATION
CHICAGO

AMERICAN FRUIT GROWER

THE CELOTEX CORPORATION
CHICAGO
Please send me FREE construction details on
☐ Fruit Storage ☐ Vegetable Storage

Name

Address

City

County State

PAGE 13

Reel action at X

"Movies" are up front, too, for periods of relaxation. Keeping these "Reels" rolling, is one of our assignments — for the projectors are operated with lighting equipment powered by Briggs & Stratton gasoline motors. This is but one of scores of "special" applications, in addition to many major ways by which Briggs & Stratton motors are serving our armed forces.



OWNERS of 4 cycle air-cooled Briggs & Stratton motors are fortunate. They are not only assured of dependable power during the present emergency, but they know that these sturdy gasoline motors embody built-in features and quality that insure constant delivery of capacity power year after year. Now, when all equipment is being operated "around the clock", it is most important to keep your Briggs & Stratton motor in tip-top condition. It will pay in extra performance and even longer life.

A book containing Operating Instructions, Adjustment and Repair Information is available on request. When writing, be sure to mention the model letter of your motor.

BRIGGS & STRATTON CORP.
MILWAUKEE, WIS., U. S. A.

FOR VICTORY
Buy U. S. War Bonds



BRIGGS & STRATTON

EST. 1905

TIME OF HARVEST

(Continued from page 12)

Such records would be of help in planning orchard operations.

The subject of time interval also calls attention to fruit and plant development and suggests that orchard operations such as fruit thinning, irrigation, spray coverage, cultivation and application of harvest spray might well be based on the development of plant parts, such as the fruit, rather than on calendar dates. Insect and disease specialists time their spray programs with reference to the life cycle of the insect or disease under consideration, yet horticulturists have done but little with the possibility of correlating orchard practices with the development of fruit and fruit parts. This is in part due to the woeful lack of information on the development of fruits. As has been pointed out, entomologists have worked out the life cycles of various insects, pathologists have worked out the life cycles of various disease organisms, poultrymen have studied egg development, but somehow the life cycles of fruits have been largely neglected until relatively recent times. Yet there are some indices now on record which are of some value and which suggest that others may be found. Among these, for peaches, cherries and plums are the three stages of development, namely: Stage I, rapid development of fruit beginning with full bloom; Stage II, period of retarded development; and Stage III, second period of rapid development or "final swell." Also, there is the point at which the embryo begins its period of rapid development and the point at which the pit begins to harden.

The entire situation suggests the value of more complete data on the growth of fruits and of fruit parts and their application to horticultural practices, of which the time interval from full bloom to fruit maturity is one.

BUSH FRUITS

(Continued from page 13)

though the strawberry is the most important small fruit frozen and used for preserves, raspberries and blackberries are also extensively used. The packs of these berries in 1942 were larger than in 1941. And the 1942 pack of frozen raspberries (in pounds) was 18,700,000, as compared with 18,000,000 in 1941; and of blackberries 11,000,000, as compared with 9,000,000 in 1941; and of other berries 15,580,000, as compared with 11,000,000 in 1941; in all, a 19 percent increase over the 1941 packs. Fifty percent of the 1943 pack of canned raspberries and blackberries and 100 percent of the canned blueberries is reserved for military use.

LOOKING AHEAD IN PEACHES

By PORTER R. TAYLOR

DURING the 1942 peach season a surprising amount of promotional work was accomplished by the National Peach Council in making the general public more conscious of peaches. The results of this effort have indicated the desirability of developing for the future a permanent program for the advertising of peaches.

Before discussing such a program, certain fundamentals which are the foundation of successful advertising must be considered. One of the most important of these is to develop a wide acceptance of a particular product by consumers generally, so as to assure a more stable demand through established consumer interest and thus protect the capital invested in the production of the particular product.

Another closely related fundamental is that the basic advertising devoted to building demand should be carried on and financed by the manufacturer or producer of the product rather than by the distributor who handles it. The producer has a definite interest in creating demand for the particular article, as it may be the only product which he sells. On the other hand, the distributor usually handles hundreds, if not thousands, of other products which claim an equal share of his time and attention.

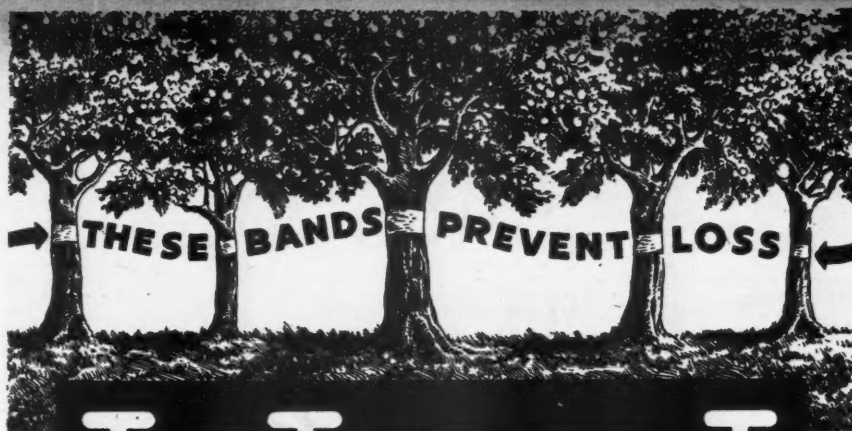
Another fundamental purpose of advertising seasonal products is to inform the consuming public that certain commodities are available and on sale. This is most important in the case of a product such as peaches, the supply of which increases rapidly in volume during a short period of time.

Far too many agricultural producers have believed that an advertising program failed unless it produced an immediate premium well in excess of the cost of the advertising. Such expectations are wrong, as the real purpose should be to establish a more stable demand over a considerable period of time, or to advise consumers that supplies of a seasonal product are generally available at a particular time.

Those who are considering the financing of an advertising program should look upon it as a long-time investment to build a market rather than a project which can be started and stopped from season to season. This does not mean that advertising expenditure should not increase or decrease from time to time as needed, but rather that such adjustments

(Continued on page 16)

MARCH, 1943



TREE TANGLEFOOT

Says HALT to All Climbing Insects

Don't let climbing insects sabotage America's fruit production in this vital year of war when crop damage can be prevented and bigger yields assured by the use of Tree Tanglefoot.

This time-proven product applied in a band around the trunks of fruit trees and vines absolutely prevents climbing insects from ascending into the branches where they devour the buds and foliage.

During 30 years of continuous use Tree Tanglefoot has received the enthusiastic endorsement of Growers and Entomologists as a safe and completely effective protection against cutworms, cankerworms, tussock moth caterpillars, Fuller rose weevils, hop flea beetles and other enemy invaders.

Tree Tanglefoot is inexpensive and easily applied. One application lasts for months. Prevent loss. Band with Tree Tanglefoot **AT ONCE.** Available at hardware and seed merchants.

THE TANGLEFOOT COMPANY

Grand Rapids, Michigan

For Victory — Buy War Bonds



**DESTROY ALL ENEMIES OF
AMERICA'S 1943 FOOD PRODUCTION**

EYEGLASSES BY MAIL

\$1.95 ADVANCE SPECTACLE COMPANY
537 South Dearborn Street
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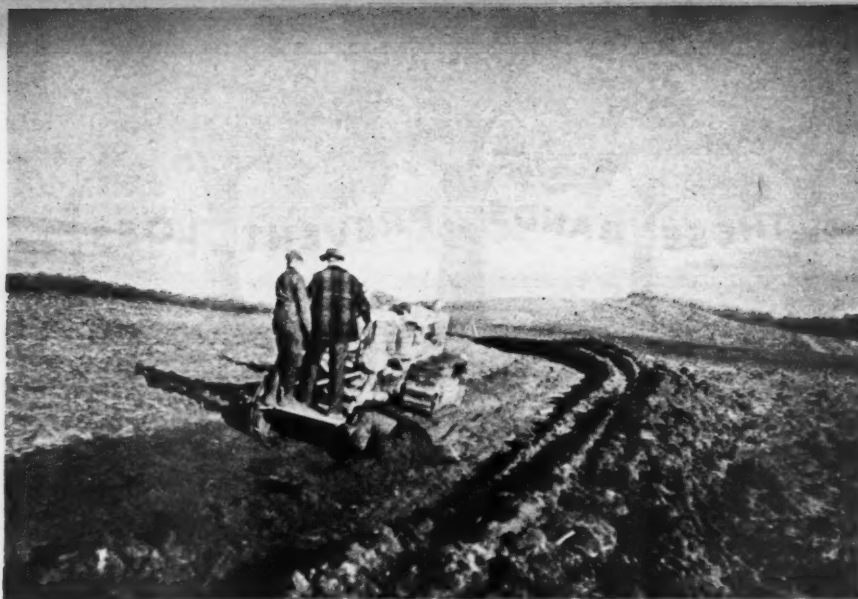
STRAWBERRIES

PAY Allen's Berry Book describes best early, medium, late and overbearing varieties. Tells how to grow big, luscious berries for home and market. **COPY FREE WRITE TODAY**

W. F. ALLEN COMPANY
22 Evergreen Ave., SALISBURY, MD.

AMERICAN FRUIT GROWER

PAGE 15



Terrace construction on David Murray farm is demonstrated by W. A. Cutler, soil conservation technician, to Roy Hooper, Jr.

BIRTH OF A CONTOUR ORCHARD

By E. B. SWINGLE

MICHIGAN'S largest contour orchard has been placed on paper and partially planted in the peninsula of Grand Traverse County.

It took a former Chicago resident to acquire the vision and the courage to adopt soil conservation and terracing so heartily that his farm, at least at present, has this distinction.

David R. Murray went to Traverse City in 1916 from Chicago. He had heard about the area's fruit growing possibilities, since the peninsula has a nationwide reputation as one of the largest producers of sour cherries in the United States.

His first purchase was 83 acres of land, mostly set to cherries, apples, and plums. Murray soon was a regular fruit grower, producing crops that compared well with those of his neighbors. But he noticed that continuous clean cultivation, especially up and down the slopes, was doing something to the soil. His orchard acres began dropping in yields, the soil seemed to be getting thinner and losing its fertility.

In 1939, Murray was one of the first farmers in Grand Traverse county to apply for assistance when the Federal Soil Conservation Service selected the county for a demonstration project. Soils, slopes, erosion conditions and the kinds of fruits had to be considered, but technicians assisted in working out a soil erosion control plan for the farm. Murray furnished a tractor and labor to lay out diversion ditches and put a diversion terrace on one of the slopes. Other steep slopes were seeded to a grass legume mixture. Mulches were used under trees to keep the grassy

growth from competing with the fruit production.

Such technical devices as alternate middles, cover crops, trashy cultivation and partial sod helped the Murray orchard and helped neighbors observe the value apparent in the demonstrations.

Murray took on more courage when it looked as though such a problem as erosion could be put under control. He purchased 343 acres, known as the old Ridgewood Farm, north of Old Mission in Grand Traverse County.

There were old fruit trees on much of the farm, but what interested the new owner far more was the good fruit soil and the location of the farm.

Enough farmers in the county in the meantime had become convinced of the merits of soil conservation so that in 1941 an official Grand Traverse County Soil Conservation District was organized, to include the entire county. Directors Earl Joer, Roy Hooper, Victor Clous, Ernest Heim, and Neil Morrison approved use by Murray of district technicians to work out a farm plan.

That has led to the plans for the largest contour orchard in the State. Old trees have been torn out. Forty acres have been prepared and partially planted with terraces spaced one or two tree rows apart. The total contour arrangement will control erosion on 200 acres of orchards. Murray plans to set the remaining 160 acres as soon as practical.

Twice in 1942 the erosion control proved worthwhile. In May and June some heavy rains filled the ter-

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LOOKING AHEAD IN PEACHES

(Continued from page 15)

should be made according to a definite program related to production and marketing.

During recent years there has been an increasing realization of the vital importance of the retailer in successful marketing and promotional effort. Fortunately, agricultural groups have received fine co-operation from organized retailers during recent years and much of the success of the numerous promotional programs for many foods can be attributed to this fact.

Now let us try to apply these general principles of advertising to peaches. First, an advertising program should be planned to continue over a period of several years rather than to attempt to operate only when the production of a bumper crop is definitely known in a particular season. Second, it should be financed primarily by the producer of the peaches, although assistance should be welcomed from others interested from other viewpoints. These funds should be considered as a part of the capital investment in the orchard as they will be devoted to building a market for its product. The funds should be pledged over a period of years to minimize costs of solicitation and collection, and should be paid in advance of harvest, as the obligations must be entered into prior to harvest. Much of the program should be devoted to furnishing information to consumers with regard to available supplies and to methods for increasing peach consumption.

Successful advertising is dependent upon the marketing of a good quality of fruit. New demand cannot be created for a poor product, and it is a waste of funds to attempt to do so. Many of our past difficulties in peach marketing have been due to this fact and each producing district should work out a quality program before it enters into a substantial promotional effort.

California, Utah, Colorado, and Georgia have found that they can achieve this end through a marketing agreement. Any other area should work out an effective quality control program through this or other methods.

The major problems in developing a promotional program for peaches center around organization and financing, as many of the operating methods have been developed by other fruits, such as citrus, apples, and pears. The short period during which the crop from any single producing area must be marketed has created the false impression in the minds of many growers that they should be interested in the peach market only during the period when their own crop is going

to market. This is not true, as the outlet for their peaches will depend to a considerable degree upon the demand which has been created in advance and the quality of fruit marketed prior to the time when they enter the market with their own crops.

Organization for advertising purposes on a regional basis would seem to be sound, although the size of the regions would need to receive special study so that they might be most efficient for operating purposes.

The raising of funds to finance a program will be of major importance. This may be done on a voluntary basis, or through the use of some form of public authority which will make payment compulsory on the part of all.

We also have a number of advertising programs for various products financed through the collection of state taxes. The primary advantage of this method is to spread the cost over all those producing the commodity for commercial marketing.

Regional organizations may also carry on a considerable amount of promotional work. If the producing area includes important consuming centers, the region could do all or a part of the work in its own territory.

If the region ships most of its production to distant points, then there must be some form of promotional machinery developed in those markets. Because of the brief marketing period from each producing area, it would seem only sensible to expect that promotional work might be carried out in more distant markets through a consolidated organization which would function from the beginning to the end of the entire marketing season. A joint program of this character would have such advantages as wider coverage, continuity of contacts and personnel as well as efficiency and economy of operation and it would hardly appear to need further justification.

The National Peach Council could well be that central directing agency which would function in the interest of the group as a whole and which would assume the responsibility of coordinating the entire program into one effective unit throughout the entire season and in all or in a majority of the markets of the country. Each producing district can be represented on the National Peach Council, if it desires to do so.

Unquestionably, the start that has been made by the National Peach Council is in the right direction. By its 1942 accomplishments, it has proved that fact. By the same token, it should open the eyes of the industry to the possibilities and to the necessity for a greatly expanded effort starting in 1943. The year 1943 can be a vital one in the history of the

(Continued on page 19)

MARCH, 1943.

APPLE DRITOMIC SULFUR

Gives You This

Extra Wallop

EXCLUSIVE
SODIUM
THIOSULFATE
FEATURE PUTS
PLUS ACTION IN
WET SPRAYS!



APPLE DRITOMIC* SULFUR

A sulfur fungicide made *exclusively* for apples. Its patented Sodium Thiosulfate feature—an "extra wallop" found in no other wettable sulfur—steps up apple scab control. Apple Dritomic Sulfur is especially processed for this tough job! Economical due to low dosage requirements.

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★

DRITOMIC* SULFUR, THE "OLD RELIABLE" FOR PEACHES!

Among the earliest of wettable sulfurs. High in pure elemental sulfur content, and of fine particle size. An established leader for control of peach brown rot. Also effective for apple scab.

MICRO-SPRAY* SULFUR FOR THE GROWER WHO PREFERENCES EXTRA FINE PARTICLE SULFUR! A favorite because it's fine as the finest... films evenly and thoroughly... is high in pure elemental sulfur content.

SPRAYCOP*... A neutral copper fungicide, with high performance records for control of blotch and bitter rot of apples; leaf spot of cherries; black rot of grapes; and other copper-responding fungous diseases. Easier to use and more effective than haphazard home-made Bordeaux mixtures. SprayCOP contains no free or uncombined lime which often causes injury to plants in the "lime-sensitive" group.

FILMFAST*... Makes spray materials go further and last longer! Spreads insecticides and fungicides evenly over the surfaces of foliage, fruits and vegetables. Stops spotted spraying.



GENERAL CHEMICAL COMPANY

40 RECTOR STREET, NEW YORK, N. Y.

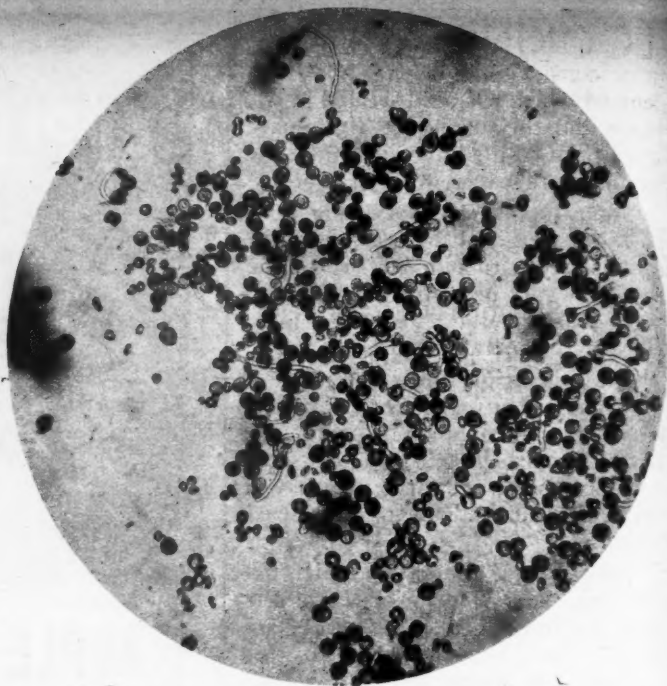
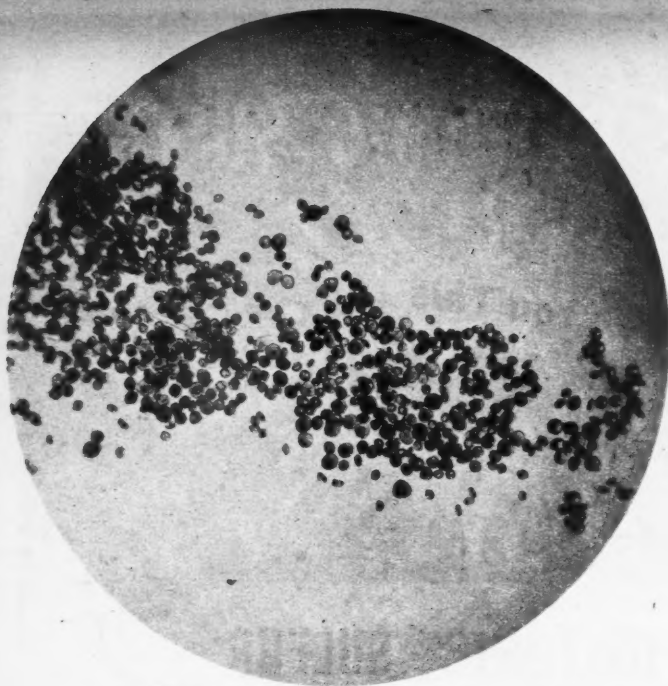
Technical Service Offices: Atlanta • Baltimore • Boston
Bridgeport (Conn.) • Buffalo • Charlotte (N. C.) • Chicago
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Wenatchee (Wash.) • Yakima (Wash.)

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*Reg. U. S. Pat. Off.



Typical pollen germination occurring in two triploid apple varieties used as intermediate stocks. These varieties do not produce good seedlings. Left—Virginia Crab. Right—Hibernal.

A VIEW OF FRUIT SETTING IN 1943

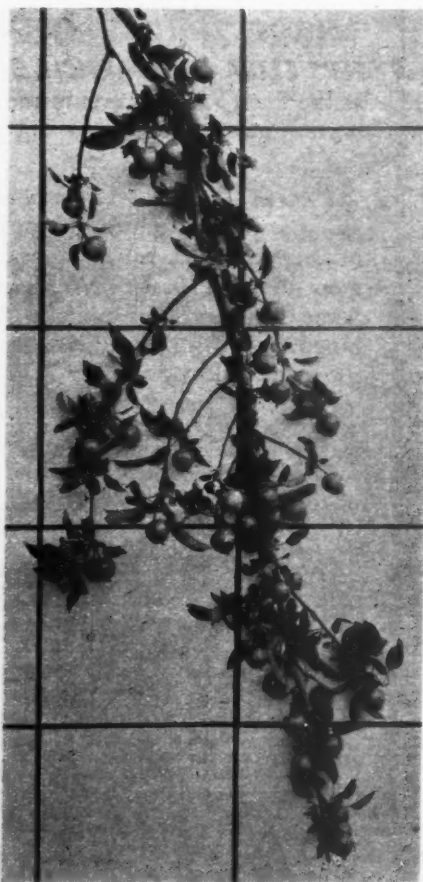
By FREEMAN S. HOWLETT

Ohio Experiment Station

IN spite of our annual concern with apple fruit setting, recent emphasis seems to have shifted toward reducing rather than increasing the set of fruit. Obviously, if the crop of fruit on the heavy-setting varieties could be efficiently reduced or the bearing of these trees changed to the otherwise "off" year, when the apple yield is less, both orchardists and investigators would feel well rewarded. A cheap and efficient chemical spray which would accomplish these results seems especially desirable now when labor and cost of thinning are almost prohibitive items. Progress is being made in this direction but as yet sprays are not sufficiently dependable and are somewhat deprecated by those who have observed the leaf injury which is frequently, associated with their use.

At present there does not seem to be much hope of eliminating hand thinning by controlling the amount of pollination which normally occurs. In the alternate bearing varieties, the trees tend to set exceptionally well. The accumulation of food materials during the two-year cycle decreases the effect of the normal competition to such an extent that this factor, so influential in annual bearing trees, becomes unimportant. Tests at Wooster indicate that one day of weather conditions favorable for bee flight is more than sufficient for a full commercial crop in these heavy-setting varieties, yet it is common practice to leave insects in the orchard during the entire blooming season. Obviously, this is certain to result in the production of an excess-

sive crop, necessitating heavy thinning if satisfactory fruits are to be produced.



Excellent set on Delicious apple variety. Each square represents 12 inches.
AMERICAN FRUIT GROWER

Despite the current interest in reducing the set with sprays or by other means, unsatisfactory fruit setting is still a problem, although it has been reduced chiefly to a varietal concern with respect to the various tree fruits.

About a decade ago frequent articles on pollination studies appeared in journals and society reports, but for the past five years the number has greatly diminished, for in general, growers are now well informed on the subject. Also, whenever a new variety is introduced the pollination requirements are publicized. If a variety of a tree fruit is involved we are informed as to whether or not its pollen is viable and whether the trees are to be planted with pollinizing varieties. Or we may merely, by a knowledge of the chromosome number of a variety, predict the probable viability of its pollen, thereby eliminating in many instances the necessity for performing cross-pollination tests, employing this variety as the pollen parent.

Recent studies of the apple variety Delicious clearly illustrates the shift toward the varietal viewpoint. Another recent study concerns the effect of pruning, ringing and branch-bending upon the set of the pear variety Doyenne du Comice, which, although outstanding from the point of view of market demands, is nevertheless precarious in its fruit setting characteristics. Examples of fruit which have been eliminated from the commercial plantings because of unstable characteristics include Arkan-

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LOOKING AHEAD IN PEACHES

(Continued from page 17)

industry because under the cruel, yet beneficent, influence of the war, great strides can be made toward a permanent structure of promotional effort that should see the industry through the uncertainties and hardships of the post-war adjustment period.

The ideal set-up would be a nationwide commodity program supported by all the important producing areas. Under such a plan, a continuous and hard-hitting program could be evolved that would be geared to the task of moving peaches when they have to be moved, carrying each region through its peak with dispatch, maintaining a level of consumer demand sufficient to move the entire crop at a profit.

That is the ideal plan and one that will probably be developed only with time and human experience. However, growers have the nucleus of such a plan in the National Peach Council. Therefore, it deserves their unstinting support. If the time has not yet come for a pooling of interests leading to a nationwide commodity campaign, then by all means state or regional campaigns should be developed on a basis that will move crops under current favorable marketing conditions, giving such support to the council as will enable it to do as much of a national job as possible.

ROADSIDE MARKETING AND GAS RATIONING

By A. N. PRATT

RESTRICTED highway travel will affect certain changes at the roadside markets throughout the states, but many of the prominent fruit growers of Tennessee have made provisions to meet these changes.

Harry Wallace, proprietor of Wallace's Market on the highway from Knoxville to Norris Dam, says that tin and gas rationing had but little effect on his gross sales last fall. Fewer cars stopped, but the customers bought in greater quantity, and often a car carried two, three and even more customers.

When an extensive highway improvement project cut off traffic in front of Alfred Swann's fine roadside market on the Knoxville-Ashville Highway, a branch market was established at an important intersection 10 miles away.

And last year when motorists suddenly had to call a halt to unnecessary driving, Paul Conley, a former school official of Crockett County and now an active fruit grower, found his customers asking for bushels instead of small baskets of his fine specialty peaches. Although his sales were fewer, the quantities of fruit sold were greater.

Provisions to handle produce in larger containers should be a prime concern of next year's roadside market proprietor, and as customers will want each stop to count for as many items as possible, the range of products should be expanded if possible.

MARCH, 1943

You can buy a
Model HG CLETRAC
Now!



PREVIOUS government orders restricting the production of Cletrac Model HG tractors have been modified, permitting us to manufacture a limited number of these tractors. Those farmers who can qualify under two conditions can purchase these new Cletracs now. The stipulations are:

- 1** If your crops are specialized or conditions on your farm are such that a wheel tractor cannot operate successfully, and:
- 2** You agree to use your new Cletrac as far as possible to do custom work for your neighbors.

The second requirement works no hardship on Cletrac owners, because with a Cletrac tractor your farm work can be done on schedule, regardless of soil or weather conditions. You plow, plant, cultivate and you harvest *on time*. You save many valuable man-hours of labor and find custom work easy to do. By planning your work and working your plan with a Cletrac you will help produce *more food*. More food is vital to winning the war.

These additional Model HG Cletracs are limited in number. The demand for them will be greater than the quantity we are permitted to manufacture. See your Cletrac dealer without delay. Get complete details at once.



THE CLEVELAND TRACTOR CO. • CLEVELAND, OHIO

CLETRAC CRAWLER TRACTORS

★ GASOLINE OR DIESEL ★

Package Bees and Queens

Three-Banded Italians

for quality and prompt service

2 lb. pkg. with Queen \$2.95

3 lb. pkg. with Queen \$3.80

Extra Queens @ 3.90

We specialize in Queens. 20 years experience.

DUPUIS APIARIES, Andre Dupuis, Prop.

Breaux Bridge, La.

AMERICAN FRUIT GROWER

Quickly Attached



Falls Tree, Cuts Log

Uses Power Take-off

any tractor. Direct drive.

Long stroke. Saws fast.

Easy on fuel. Hundreds of satisfied

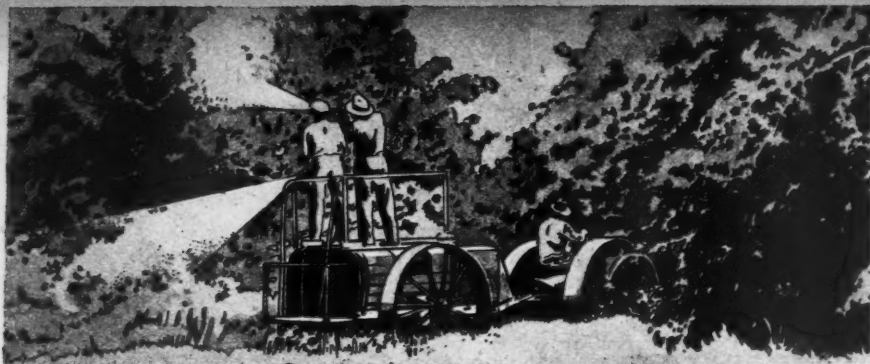
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OTTAWA MFG. CO., 5332 Forest Ave., Ottawa, Kans.

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PAGE 19



To the Grower WHO NEEDS A NEW SPRAYER

● New Hardie Sprayers will be rationed by County Rationing Boards. Production of new equipment will be limited to the most urgent need. You may not be able to buy a new sprayer easily or quickly. But if you have an old Hardie all necessary new parts, replacements, repair materials are readily available, and that old Hardie will give you new sprayer performance when properly serviced. New guns, hose, even complete new pumps can be obtained to replace worn out units. Ask any Hardie dealer or write or wire us.

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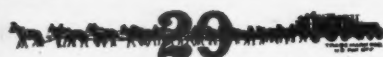
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THE ONLY SPRAY PUMP THAT IS *Completely Lubricated*

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BORAX—BORIC ACID

Borax or Boric Acid—for the effective control of BORON DEFICIENCY DISORDERS in apple orchards.

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SPRAYERS!

Here is the Only Way to Maintain CLEAR VISION . . .

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Face Protector with Renewable Tear-Off Visor!

★ Don't let lime, lead and sulphur spray interfere with better crop coverage. Just pull out and tear off a strip of transparent ribbon for continuous CLEAR VISION. Order from your seedsmen or hardware dealer—or write direct. \$3 complete.

CHICAGO EYE SHIELD CO., 2307 Warren Boulevard Chicago Illinois



MAKE MONEY with NEW SUNRISE red raspberry. Ten days earlier than Latham. Brings \$6.00 a case. Free catalog of new fruits. ANDREWS NURSERY, Faribault, Minnesota.

AMERICAN FRUIT GROWER

STATE NEWS

IOWA—More commercial apple orchards are needed in this State, according to the results of a survey which recently was made by Professor H. E. Nichols of the Extension Service, Iowa State College, Ames. There are fewer apple trees in Iowa now than at any time in the last 60 years.

Before 1940 a group of 58 growers had an aggregate total of 985.9 acres of commercial bearing apple trees throughout the southern part of the State. After 1940 this acreage was reduced to 411.4 acres. There was not much loss in young, unbearing trees, however, and these growers reported a total of 215 acres of hardy stock.

Twenty-five per cent of them had abandoned orcharding since 1940 and of the remainder many lost practically all their plantings and replanted only a fraction of their original holdings.—R. S. HERRICK, Sec'y-Treas., Des Moines.

MINNESOTA—Benjamin F. Dunn, Rochester, was re-elected President of the Minnesota State Horticultural Society at the Annual Meeting held at University Farm, St. Paul, in January. Mrs. Verl Nicholson, Duluth, was re-elected Vice President.

As a result of continued illness of Secretary Mackintosh, the executive board named Louis Sando, Acting Secretary-Treasurer, and Dr.



Prof. W. H. Alderman, right, Chief of the Division of Horticulture, University Farm, shows samples of the new Victory apple to Henry W. Leidel, Pres. of the Minnesota Fruit Growers Association.

A. N. Wilcox, Acting Editor of the Minnesota Horticulturist. Mr. Mackintosh is retained in an advisory capacity until he is able to resume full duties.

The highest award of the Society, an honorary life membership, was awarded to J. K. Andrews, Faribault. Mr. Andrews' firm operates the largest orchard in Minnesota and also the largest berry plantings.

A bronze medal was awarded to Frank L. Skinner, Dropmore, Manitoba, for his outstanding work in plant breeding. Certificates of merit were received by: Henry W. Leidel, President of the Minnesota Fruit Growers Association, for leadership in fruit growing; to W. R. Leslie, Superintendent of the Dominion Experimental Farm, Morden, Manitoba, for development of prairie region horticulture; and to D. T. Grussendorf, Duluth, for his work in promoting the marketing of small fruits.—J. D. WINTER, Sec'y, Mound.

MARCH, 1943

NEW HAWKING CHERRY
Immensely productive—hardy—quick bearing—thrives where Montmorency fails. Free catalog of newest fruits. ANDREWS NURSERY, Faribault, Minnesota.

KENTUCKY—Instead of complaining about the labor shortage, the growers in this State are planning for the use of labor saving devices, overlooking unnecessary winter jobs and making unusual preparations to have spraying equipment ready for use in the orchards when the time comes to combat insects and diseases. The winter so far this year has been very favorable to both fruit trees and berries and the Kentucky fruit growers are optimistic over the outlook for fruit and berries in 1943.—**W. W. MAGILL**, Sec'y, Lexington.

MARYLAND—Extensive pruning answers the labor problem for many fruit growers here. Some are making larger cuts in the lower parts of apple trees with little or no cutting in the tops, excepting branches that are unnecessary, or that are getting out of control. On some varieties a thinning of weak fruit hangers is suggested.

Peaches are being tipped back slightly with little thinning out except for the removal of weak branches of small to medium size. Not too many of these cuts are made.

In older trees that are becoming rangy, the branches are being headed back moderately to lateral branches. Such pruning probably will require more hand thinning and, where thinning labor may be scarce, the pruning is a little more detailed to reduce fruiting wood. Young apple and peach trees are pruned lightly, if at all.

Many growers are showing interest in the possibility of thinning blossoms with caustic sprays as a means of reducing hand thinning. Also, there is the possibility of spraying very light blossoming blocks for the purpose of removing the entire set of blossoms, throwing the block completely out of production.

All the apples that can be produced are needed, but they should not be grown at a loss. Growers are cautioned to get all the facts before using these blossom-thinning sprays.—**A. F. VIERHELLER**, Extension Horticulturist, College Park.

SOUTH DAKOTA—Although January temperatures went as low as 30 degrees below zero, no winter injury is apparent, or expected, to the fruit trees throughout the State.

Growers, encouraged by the good prices received for last year's crop, are planning considerable new planting for this spring. Wealthy and McIntosh will be the principal varieties planted. The latter is comparatively a newcomer in most sections, but it has done well and consumers are demanding it.—**W. A. SIMMONS**, Sec'y, Sioux Falls.

OHIO—Approximately 300 fruit growers attended the 76th Annual Meeting of the Ohio State Horticultural Society in Columbus, Jan. 26-28.

Interest centered on cultural practices that would employ labor, materials and equipment most efficiently during the war emergency.

During the course of the meeting the Ohio Apple Institute held its Annual meeting and **Frank I. Giffin**, Representative from Mt. Gilead, with the full backing of the Institute and most of the apple growers in the State, introduced the Giffin Bill, H.B. 180, which would set up an authority of five apple growers, to be appointed by the Governor, to promote the consumption of Ohio apples by assessing one cent a bushel, or two cents a hundred-weight, by the seller who first places the apples in channels of trade. There would be an exemption of 250 bushels to all apple growers so that small producers will not be concerned with the operation of this program.

The bill provides that the funds be paid into the State Treasury and paid out on order of the authority. Those who have long experience in the voluntary program of the Ohio Apple Institute are hopeful that this bill will become a law and will provide a much larger fund to do a worthwhile job in promoting Ohio's apples.—**FRANK H. BEACH**, Extension Horticulturist, Columbus.

(Continued on page 23)

MARCH, 1943

FIGHTING ACRES



America's 6 million farms spread over a half-billion acres.

Right now these are fighting acres.

They're feeding at least 7 million soldiers and sailors, each of whom eats nearly twice as much as the average civilian.

They're feeding America's 35 million families.

And to top all this, they've supplied 1 3/4 billion dollars worth of food to our lend-lease allies in the last 18 months.

Most of this produce was carried by the railroads to the ports — carried in addition to the vast movement of troops, military machines and other war goods.

To keep it all on the move, the railroads are starting off a heavily loaded freight train every four seconds — are hauling a million and a quarter tons of freight a mile every minute of the day and night.

In doing their job the railroads face pressing problems similar to the farmers'.

A lot of our men have joined the armed forces. We cannot get all the extra engines and cars the rush of work requires.

But just as the farmers are going all-out to produce everything they can, we'll do our level best to continue to carry everything they grow as swiftly and reliably as we always have.

ASSOCIATION OF
AMERICAN



RAILROADS

WASHINGTON, D. C.

TO GROWERS WHO MIX BORDEAUX

Bordeaux mixtures which *effectively* control fungous diseases depend on the elimination of guess-work and haphazard methods of determining the amount of Copper Sulphate in the spray mixture. Nichols Triangle Brand "Instant" Copper Sulphate gives you these 10 advantages:

1. **ACCURATE CONTROL** . . . You know exactly how much copper sulphate is in your mixture.
2. **GREATER SAFETY** . . . Control of mixture means increased safety.
3. **BETTER MIXTURES** . . . Dissolves instantly and completely.
4. **ECONOMY** . . . No waste, no sediment, no undissolved crystals. **YOU USE IT ALL!**
5. **EFFICIENCY** . . . 99% pure, 100% efficient.
6. **FASTER OPERATION** . . . Saves time, labor . . . mixes directly in the spray tank. Requires no agitation.
7. **REDUCED EXTRA HANDLING** . . . Eliminates extra equipment necessary for making stock solutions.
8. **KNOWN QUALITY** . . . Standard for 50 years, it is the oldest and best known brand. Modern manufacturing methods assure never failing high quality in every package.
9. **MODERN PACKAGES** . . . Special packages safeguard quality. At no extra cost you receive the best in modern packaging.
10. **PRODUCED IN 3 LARGE PLANTS** . . . Your dealer can always supply you because of three strategically located plants.

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ORIGINAL "INSTANT"

ASK YOUR DEALER for Nichols Triangle Brand "Instant" Copper Sulphate today. He also carries LARGE AND SMALL CRYSTAL and SUPER-FINE NICHOLS COPPER SULPHATE for STANDARD BORDEAUX, and MONOHYDRATED for copper lime dusts. Write for your copy of the Bordeaux Booklet.

SAFEST, MOST EFFICIENT COPPER FUNGICIDES USED

C-O-C-S

Copper Oxychloride Sulphate

B-C-H

Brown Couprie Oxide Hydrated

For four years in succession, these recently developed copper fungicides proved safest and most effective for controlling cherry leaf spot when used in concentrations as low as .75 pounds metallic copper with 2 pounds of lime in 100 gallons of water. Much safer and more convenient than Bordeaux, these insoluble, fluffy fungicides can be used as a dust or spray. They also may be combined safely with insecticides or other fungicides.

Write for particulars today.

Manufactured by

The Harshaw Chemical Co.
Cleveland, Ohio

Distributed by

The Niagara Sprayer and Chemical Co.
Middleport, N. Y.

CAMERA AT WEST VIRGINIA MEETING



THE Ladies Take Over! Judging from the photo above, women are replacing men in the fruit growing industry as well as in munitions plants. This was snapped at the West Virginia Horticultural Society's 50th Annual Convention, Martinsburg, Feb. 10-11. In the center front is M. E. Knouse, canner of Peach Glen, Pennsylvania. The Society's executive committee judged that he had done the most for West Virginia's fruit growing industry during the past year and presented him with a life membership in the Society. Left to right in the photo are: Mrs. W. F. Yingling, Reisterstown, Md.; Mrs. Mary Snader, Waynesboro, Penna.; Dr. J. R. Magness, U.S.D.A., Beltsville, Md.; M. E. Knouse, Peach Glen, Penna.; Ed. A. Leatherman, Rada, W. Va.; Mrs. Martha Wageley, Waynesboro, Pa.; Society President E. Lee Goldsborough, Shepherdstown, W. Va.; Dr. Ray S. Marsh, Chief in Horticulture, West Virginia University, Morgantown, W. Va.



Above: Mr. M. E. Knouse talks with Mrs. Martha Wageley, who handles the business affairs for the extensive D. M. Wertz Orchards, Waynesboro, while President E. L. Goldsborough of the Society listens on with interest. Mr. Knouse was singularly honored at the meeting because of recognition for his leadership in maintaining market prices for apples and in solving the many mutual problems that beset both canners and growers under wartime regulations. Presentation of the award given to him was made by Henry W. Miller, Jr., Paw Paw, during the banquet session of the convention.



In the picture above, left to right are: Dennis Law, County Agent, Romney, W. Va.; Dr. J. R. Magness, U.S.D.A., Beltsville, Md.; E. A. Leatherman, Rada, W. Va.; and Dr. R. S. Marsh of West Virginia University.

STATE NEWS

(Continued from page 21)

CONNECTICUT—The Fruit Grower Committee and the Experiment Station Entomologists have agreed to continue to produce and liberate oriental peach moth parasites in 1943, using the macrocentrous parasite which proves to be effective under Connecticut conditions. Harold M. Rogers, Southington, is chairman of the group.

C. H. Gowdy, President of The Connecticut Pomological Society, has appointed a War Emergency Committee to work in the interests of the fruit industry in the State. Appointed are: Messrs. John Lyman, Middlefield; Charles B. Young, Wallingford; Harold M. Rogers, Southington; Carlisle H. Gowdy, Greenwich; Albert B. Cole, Bantam; and Howard A. Rollins, Storrs, chairman.—H. A. ROLLINS, Extension Fruit Specialist.

MAINE—On February 11, the Maine State Pomological Society held a one-day meeting in Auburn. Another meeting will be held March 23 at Orono.

At the last meeting the economics and mechanics of apple dehydration were presented by C. C. Eidt, Ottawa. But since Maine's leading variety, the McIntosh, does not lend itself to dehydration, no immediate large development in that direction is expected to follow. Mr. Eidt's point that a fruit products industry should accompany a fruit industry is a serious thought for fruit growers in the State. An outlet is needed for undersized and poorly colored apples.

Other topics discussed clustered around the conditions and requirements of wartime, fertilizer situation, apple box situation, and availability of other supplies.

Visiting speakers at the forthcoming meeting will be G. M. Foulkrod, Durham, New Hampshire; R. H. Suds, Morgantown, West Virginia; Walter Norton, Southboro, Mass.—J. H. WARING, Sec'y, Orono.

INDIANA—Unfortunately, sub-zero temperatures have eliminated the peach crop in one-fourth of the northern part of the State, according to growers' reports. The lowest temperatures occurred during the latter part of January. The mid-February freeze may have reduced further the prospects for 1943's crop.

The continued cold has interfered with the pruning program in many Hoosier orchards with the result that the total amount of pruning done in this State probably will fall below normal.

A survey, covering between seven and eight per cent of the commercial acreage of tree fruits in Indiana, indicates only between 18 and 20 per cent of the total containers that will be required for marketing the crop this year are on hand. This emphasizes the need for a program to provide needed packages for marketing the 1943 fruit crop.

To alleviate the labor situation this summer Dr. Clement T. Malan, State Superintendent of Public Instruction, has mailed to all city, town and county superintendents and high school principals complete information on the organization of the Boys and Girls Working Reserve for the purpose of providing additional help for the farmers in Indiana. This is a program which will be of great help during the coming season.—MONROE McCOWN, Sec'y, Lafayette.

WEST VIRGINIA—Fruit growers in the Martinsburg extensive fruit growing belt are asking Selective Service headquarters to instruct local boards in the apple country to "use their discretion and localized knowledge" in applying the most recent ruling on deferment of labor for orcharding which permits only one laborer for every 32 acres in the non-irrigated orchard country as against the allowance of one man for every 16 acres in the irrigated orchards in the western part of the State.

MARCH, 1943



MORALE IS A LOT OF LITTLE THINGS

WHAT made the Missus think to send John, the mechanic, one of her mince pies? What makes neighborliness grow? How does a cheerful whistle blot out a thousand frowns? Maybe no one knows.

But we all of us do know that such little things add up into that very big and important thing we call "morale."

For morale isn't something we get out of a pill or a package; it's something inside us.

★ ★ ★

One of the little things many Americans enjoy is the right to a cool and relaxing glass of beer when the day's work is done. It doesn't have to be beer—it can be lemonade or buttermilk.

A small thing, surely—not of crucial importance to any of us. And yet—morale is a lot of little things like this. Little things that help to lift the spirits, keep up the courage, make us more tolerant and understanding of one another. Little things that are part and parcel of our own American way of life.

And, after all, aren't they among the things we fight for?



HUNTS ACME GRAFTING COMPOUND. Used for grafting or as a protective coating. Protect your trees against rabbits and other rodents. **RODENT REPELLENT.** kills peach tree borers. Also brush and hand grafting wax. Send for price list. Above products endorsed by Michigan State College. M. J. BECK, Successor to M. H. Hunt & Son, Box 7, Lansing, Mich.

GRAFTWAX—TREE HEALANT Heals pruned stubs. Arrests—cures tree diseases, blights, wounds. Waterproof, adhesive. Excels in grafting. Hastens union of stock and scion. **SMEARED ON GOLD.** Scions dipped in melted Graftwax keep Tree Healed indefinitely, prolonging grafting season. Curative tree cavity filler. **GRAFTWAX SEALS AND HEALS.** 1 lb. 60c. 2 to 6 lbs., 50c lb. 12 lbs., \$5.00. Postpaid. Free Sample. CLARION DEVELOPMENT COMPANY, Dept. A, Clarion, Pa.

PAGE 23

WAR-TIME CARE for your tractor

FACED with urgent demands for greater production and handicapped by scarcity of farm help and shortage of new tractors, the wise farmer will make sure his tractor is in good shape.

Things You Can Do Now

Examine your tractor thoroughly to see if it needs an overhaul. Remove mud and dirt. Tighten all nuts and bolts and make necessary adjustments. Flush and refill crankcase, transmission case, and final drive. Follow closely your tractor instruction book.



During Working Season

See that all parts are thoroughly lubricated. Wipe off and service grease-gun fittings daily. Change oil periodically. Use only dirt-free oil, grease, fuel, and water. Clean out air cleaner and fuel filters regularly. Replace oil filter when necessary.

"JUST LIKE
MORE BALL
BEARINGS"

Your Dealer Can Help

If your tractor hasn't been inspected by your dealer recently, talk to him about a thorough check-up. He'll do the things necessary to put your tractor in tip-top shape, ready for another season of efficient work.

The service shops of John Deere dealers are particularly well equipped to help you. The mechanics are trained in the right methods of overhauling John Deere tractors. They have specially designed tools to do the job expertly and quickly. And, they use genuine John Deere parts.



AT ONE TIME IT WAS ONLY
A LITTLE ADJUSTMENT

John Deere tractor owners have the advantage not only of this expert service but also of two-cylinder engine design with its sturdier parts and fewer and easier adjustments. Furthermore, while a John Deere tractor is designed primarily to burn the low-cost, money-saving fuels, it also handles the higher-priced gasolines.

Regardless of the tractor you own, take care of it. When you must have a new tractor, ask your neighbor about his experiences with the John Deere during these trying times. He's John Deere's best salesman.



**BUY WAR BONDS
GET IN THE SCRAP**

A P S

A PAGE CONDUCTED IN THE
INTERESTS OF THE AMERICAN
POMOLOGICAL SOCIETY

NATIONAL HOME FOOD PRODUCTION CONFERENCE

PROFESSOR T. J. Talbert, President of the American Pomological Society, and Professor B. S. Pickett, Vice-President in charge of Pomological Organization, attended and participated in the National Home Food Production Conference held in New York City in late January.

Victory Gardens in 1943 are in the spot-light, even more so than last year. There are six million farms in the United States and every farmer is expected to grow a Victory Garden. In addition, twelve million town and city folks are being asked by Uncle Sam to grow a garden. The needs of Lend-Lease, our soldiers, sailors, marines, and war workers make it imperative that civilians grow Victory Gardens, so that this nation may be well-fed since a well-fed nation needs abundant supplies of vegetables and fruits.

Fruit growers will do their share. By nature, fruit growers are gardeners; much of their production in some areas is devoted to the growing of essential small fruits. Every state in the nation can grow a part or all of the fruits and vegetables for the support of an adequate diet at home.

Next to production is the matter of food preservation. Canning and drying have been the common methods of preserving food supplies produced in gardens and orchards. Comparatively new is the development of quick freezing and preservation in locker plants.

On good authority, it is estimated that there are 4,600 locker plants in the United States, having an average of 300 lockers per plant. These plants were first designed to preserve meats. Their use for preserving fruits and vegetables has been greatly increased and last year, in many areas, it was estimated that nearly half the locker space was occupied by frozen fruits and vegetables. Strawberries, black and red raspberries, cherries and peaches are easily processed for freezing in the home and are preferable to the canned product to many persons.

Food experts tell us we should can, freeze or dry 125 quarts of fruits and vegetables per person for home use.

* * * *

The South Dakota State College has begun the work of establishing the N. E. Hansen Foundation Orchard at Brookings. This is a suitable and appropriate way to preserve the fruits of this well-known plant breeder. It is fortunate that such an orchard is to be established while Doctor Hansen is still active and able to direct the planting of important plant materials that he has collected and bred during his active career of more than 50 years.

* * * *

Dr. A. S. Colby, Chief in Small Fruit Culture at the University of Illinois, presented an evaluation of small fruits under present conditions at the recent A.P.S.-Illinois joint convention. According to the 1940 U. S. Census, said Dr. Colby, small fruits were grown on 1,112,084 farms in the United States.

Grapes were by far the most important, there being 18 million young vines and 270 million of bearing age which produced a crop of over 4 billion, 400 million pounds of grapes in 1939. Other small fruits on farms were grown on 320,000 acres. The production was 442 million quarts. The census report shows that grapes, blackberries and dewberries, raspberries and strawberries were grown in every state in the Union. A survey just completed by Dr. Colby shows that:

"Taken as a whole, the 1942 small fruit crop was considered fairly satisfactory in yield and price. The strawberry was reported to be the most profitable small fruit in many states." Unfortunately, labor problems loom large for the small fruit grower.

H. L. Lundy
SECRETARY



Cover photograph—Spring Comes to the Santa Clara Valley

FESTIVAL OF BLOOMS

By DALLAS L. CLARK

THE cover picture depicts in full blown beauty the scene of one of California's most popular yearly celebrations, the "Blossom Festival," which occurs sometime during March in the Santa Clara Valley.

Since the year 1899, this festival has been a traditional fete in the fertile valley which is world famous for the production of fruits, especially of prunes and apricots.

The event was originated by Dr. Edwin Sydney Williams, now deceased, a minister who even 44 years ago foresaw the rich possibilities for fruit growing in Santa Clara Valley.

The scenically attractive foothill city of Saratoga, which is 11 miles southwest of San Jose, is the center of the celebration. Here Dr. Williams and his neighbors first gathered to offer thanksgiving for the bounty of the stretching valley. Stories handed from one generation of fruit growers to the next tell that this first meeting attracted hundreds of visitors who arrived in buggies and fruit carts.

Today the "Blossom Festival" is attended by thousands and a two days' program of meetings, speeches and music make the occasion both a worthy and pleasant one.

As usual this March, when the blossoms are in fullest bloom, the celebration will transpire again. Then the growers will plan and arrange to give to the needy war-torn world, the Valley's fullest and richest quota of strengthening fruits.

CONTOUR ORCHARD

(Continued from page 16)

ences but no erosion could be observed. Run-off water flowed slowly to well sodded drains, then moved to lower levels without carrying any soil.

Again in September, terraces and marks from equipment moved around hillsides practically at a level, carried water away so slowly that much of the moisture soaked into the ground. In addition to the soil and the moisture saved, Murray credits the terrace type farming with a sizable saving in fuel, time and machinery because it permits operating on the level.

MARCH, 1943



A TORCH OF LIBERTY

that Never Grows Cold

There is a blinding glare, as if you were looking into the sun.

At the tip of the torch the temperature is 6700° Fahrenheit. The welder's expert fingers "feel" the metals melt, mingle, form an inseparable bond. The tractor roars to life again, rolls out of the Allis-Chalmers dealer's shop good for a thousand more hours' service.

Never in history has the farmer, and America, depended so greatly on the skill and resourcefulness of the implement dealer. For in these

times when factory forges are beating out gun barrels instead of tractor engines, the implement dealer himself must become a "factory". He must be able to gauge tolerances within thousandths of an inch, must be equipped to rebuild the whole motor if necessary.

Allis-Chalmers dealers have the training and equipment for this vital service. For example, Allis-Chalmers "rolling laboratories"—completely equipped giant trucks—have brought to the dealer a full factory course of instruction on the famous 2-cycle Diesel tractor. So when the Allis-Chalmers dealer puts the final touch on your rebuilt tractor, or sells you a used machine, you can face the hard work season ahead with confidence that all will be well.



Every A-C machine ready for peak performance and passing inspection at your Allis-Chalmers dealer's will be awarded a beautiful red-white-and-blue FARM COMMANDO emblem.

Watch for your A-C dealer's Farm Commando machinery and tractor school—your chance to get first-hand tips from factory experts. Local officials, high school classes, 4-H and FFA boys are invited to attend this educational short course on machinery care.

ALLIS-CHALMERS
TRACTOR DIVISION MILWAUKEE, WIS.

mail this **COMMANDO-GRAM**

Allis-Chalmers may be able to help you

Allis-Chalmers Mfg. Co., Dept. 16, Tractor Division, Milwaukee, Wisconsin
Can you help me locate the following equipment, no obligation to me:

I have the following equipment for sale to someone who needs it:

PLEASE PRINT SIZE AND DESCRIPTION—NAME AND ADDRESS

Name _____ R.F.D. _____

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"Spray Guns that pay"

Your Spray Program is no better than your Spray Gun

See the New Style Hamilton Guns with Controlled Streamline

W. L. HAMILTON & CO.
BANGOR, MICHIGAN

Seven Models A GUN FOR EVERY PURPOSE

AMERICAN FRUIT GROWER



**PRUNE FASTER
SAVE LABOR WITH**

SEYMOUR SMITH

**Snap-Cut
PRUNERS**

Powerful "V" blade envil action makes clean, quick-healing cuts with little effort.

8" size, \$2.25;
6", \$1.39. All dealers or sent postpaid.



SEYMOUR SMITH & SON, Inc.
22 Main St., Oakville, Conn.

The POTASH you are using is **AMERICAN** Potash, and

1. IS SAVING YOU LABOR

- Turning livestock on pasture earlier and keeping it there longer
- Preventing lodging of grain and making other crops easier to harvest
- Producing the crop with the use of fewer acres

2. IS INCREASING YIELDS

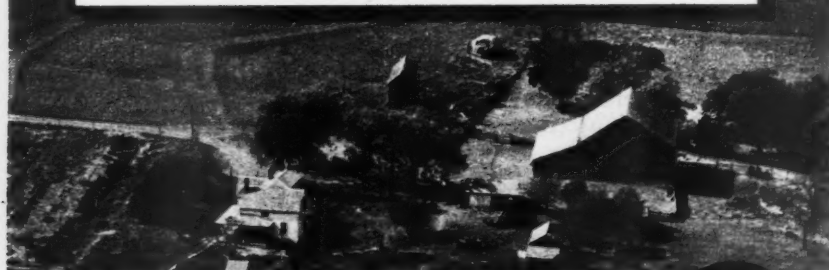
- Thickening and strengthening the stand per acre
- Enabling crops to better withstand diseases and unfavorable weather
- Making grain heavier and fruit larger and juicier

3. IS IMPROVING QUALITY

- Growing root crops which are more marketable in shape and size
- Increasing the feed value of forage crops
- Improving the carrying and keeping quality of fruits and vegetables

4. IS PREVENTING SOIL DEPLETION

- Maintaining reserves of plant food in the soil
- Encouraging good growth of nitrogen-producing legumes
- Balancing the crop's use of other plant foods.



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Washington, D. C.

American Potash
means
More Crops

THE POTASH YOU ARE USING IS INCREASING YOUR EFFICIENCY IN THE WAR EFFORT

FOOD PRODUCTION IS WAR PRODUCTION

Protect your fruit crops the modern, effective way:

26% COPPER FUNGICIDE

An efficient and economical spray to control bitter rot, scab, blotch, and fruit spot on apples, cherries, pears, and other fruits. Does not hinder photo-synthetic processes.

34% COPPER FUNGICIDE

A specific control for severe infections of bitter rot on apples and black rot on grapes. Compatible with a wide variety of organic insecticides.

The Mark of Quality



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WRITE US FOR
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HIGH-PRESSURE SPRAY HOSE

3 Braid — Any Length — Any Pressure to 1000 lbs.
Sizes— $\frac{3}{8}$ " - $\frac{7}{16}$ " - $\frac{1}{2}$ " - $\frac{5}{8}$ "

also
 $\frac{3}{4}$ " - $\frac{7}{16}$ " - $\frac{1}{2}$ " and $\frac{3}{4}$ " High Pressure Couplings
PROMPT SERVICE — LOW PRICES

Write for Free Sample
BROADWAY RUBBER MFG. CO.

Manufacturers and Engineers since 1901
529 E. Broadway Louisville, Kentucky

Small-Fruit Culture

By James S. Shoemaker

Complete discussions of all phases of production and marketing of grapes, strawberries, bramble fruits, currants, gooseberries, blueberries, and cranberries feature this text and reference book. Written in an easily understandable style, the practical grower will find this volume both interesting and useful. 52 Illustrations, 434 Pages. Sent postpaid on receipt of \$3.50.

AMERICAN FRUIT GROWER

1376 Ontario Street

Cleveland, Ohio

AMERICAN FRUIT GROWER

FRUIT SETTING IN 1943

(Continued from page 18)

sas, Paragon, Nero and Minkler apples and the J. H. Hale peach has had a short life commercially because of the development of "buttons" and consequent low yields.

Delicious is possibly the outstanding instance of a commercially important apple variety in which a need for improvement in fruit setting appears to be definitely indicated. This variety is characterized by a normally heavy drop of both flowers and very small fruits shortly after bloom, and a correspondingly light second or June drop. When this late drop is relatively heavy also, as not infrequently happens, a full commercial crop is not produced. This is unfortunate not only from the point of view of crop production but also because the oversized fruits exhibit a tendency to premature meanness.

Studies in Maryland dealing with several varieties possessing highly viable pollen and presumably effective as pollinizers of Delicious are interesting in this connection. Although significant differences in the set were recorded, all varieties employed as pollinizers gave at least the equivalent of a full commercial crop. This work would indicate that the precarious fruit setting characteristics of the variety are not due to failure to find some specific variety which is effective as a pollinizer, since all were relatively successful. This is also indicated by the fact that the trees of Delicious, surrounded by pollinizing varieties, nevertheless frequently show excessive dropping of flowers and young fruits.

Work with the Delicious apple indicates that competition between the individual flowers of a cluster for food and water is an outstanding factor affecting fruit set. Evidence in support of this conclusion is indicated by a recent work at Wooster. During the 1941 blooming season individual limbs of Delicious, Richared and Starking 15-year old trees were covered with cheesecloth bags and exposed to pollination by insects during only one day of bloom. This one day being favorable, a set of fruit equivalent to a full crop was obtained. However, the set on branches exposed to insects during the entire blooming season was usually no greater and in some instances less after all dropping had ceased. Although the difference resulting from the two treatments was apparent at the end of the first drop, the drop of fruits on the exposed branches was shown to be much more marked at the end of the second drop, thus indicating the severity of competition for food materials during this period. Flower thinning studies conducted at Wooster some

years ago definitely showed that the food factor is outstanding in limiting the set in this variety.

Practical means for providing a more favorable food supply for such light setting varieties of fruit as the Delicious apple, or the Anjou and Comice pear, have not been found.

Considerable work has been published recently on the effect of ringing on these light setting varieties of apples and pears. In some instances the set has been improved, in others not, so until these inconsistencies are explained and dependable results obtained, the use of ringing in commercial plantings seems questionable.

Growth promoting chemicals such as those employed in the pre-harvest sprays have been experimentally applied in attempts to improve the set of Delicious. Preliminary work by Greene in Indiana showed negative results. Further work will indicate to what extent competition may be compensated for by applications of these materials.

Adjustments in pruning or in fertilization with nitrogen would seem theoretically to offer the greatest hope of eliminating a possible deficiency of carbohydrates—sugar principally, water, or nitrogenous compounds. The specific adjustment, however, is still undetermined. Applications of nitrogen to the end of improving fruit set is a regular orchard practice which, in case this element is the limiting factor, would increase the set. If, on the other hand, the limiting factor is a deficiency of sugar or water or both, nitrogen applications actually might increase the competition and ultimately reduce the set. Thus, in so far as pruning removes many flower clusters and improves water supply to the remaining portions, it offers an alternate which may prove more satisfactory than the nitrogen applications. In fact, the most favorable set of Delicious which we have ever experienced at Wooster was produced by moderately heavy pruning. It is possible that more attention should be given to the time of pruning, perhaps during full bloom (see photograph). Certainly where the flowering is excessive alleviation might be attempted by pruning during or shortly after bloom. This year when labor is scarce the pruning of such varieties might well extend even into the first drop, with conceivable benefit to the second drop. Only further work will indicate the value of such means.

Although constant reiteration in regard to the necessity for pollinizing insects has become slightly boring, this fact must be re-emphasized, not only for such tree fruits as the self-unfruitful apple, pear, sweet cherry and plum, but also for the small fruits. In the blueberry plant-

(Continued on page 29)

MARCH, 1945

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PAGE 27

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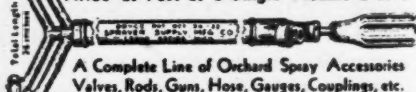


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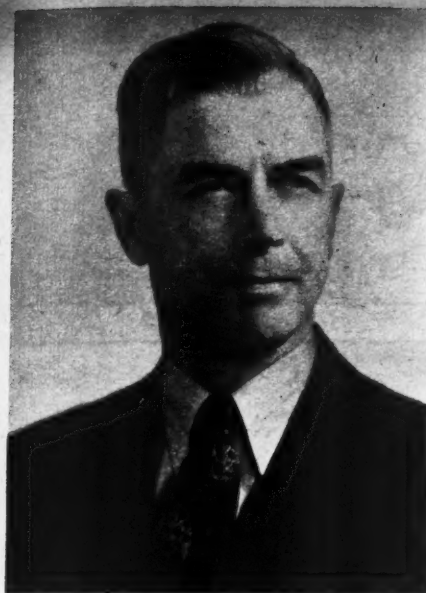
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MARCH, 1943



THEODORE A. CROSS

HEADS NEW YORK STATE SOCIETY

THEODORE A. CROSS, La-Grangeville, Dutchess County, New York, new President of the New York Horticultural Society, is son of the late Thomas E. Cross, who was co-ordinator with E. Stuart Hubbard of the New York-New England Apple Institute in 1933. He is a partner in the firm of Cross Orchards & Storage Company with two brothers and a brother-in-law. He is married and has four boys.

Their orchard business consists of approximately 125 acres of apples, young and old, which produce about 25,000 bushels per year. The chief varieties are Northern Spy, McIntosh, Cortland, and Greening. Their storage business consists of a commercial cold storage plant with a capacity of over 130,000 bushels, located at La-Grangeville. Young Mr. Cross takes an active part in both branches of this business but centers his concentration on the orchard.

ANSWERS

—Fruit Growers' Quiz

1. Downy mildew
2. Black rot, grapes
3. Black rot
4. Downy mildew
5. Currant, (c) leaf spot
6. Apple scab
7. Leaf spot
8. Peach leaf curl
9. Copper injury
10. Cedar-apple rust. Galls on red cedar.

THE MAN BEHIND THE DUST-GUN



He's America's fruit grower! While our armies engage the enemy abroad, he battles the deadly enemies that threaten our Nation's all-important fruit crops . . . vitally needed for our fighting men, war workers, civilians and Allies.

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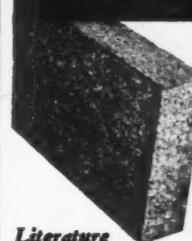
FRUIT SETTING IN 1943

(Continued from page 27)

ing, pollinizing insects apparently are indispensable to high yields. An increased use of peach varieties having sterile pollen will serve to emphasize the often repeated caution.

The grower should make provision for bees well in advance of bloom to allow the insects to become accustomed to their new surroundings. This is particularly important with the pear, the flowers of which apparently are not attractive to bees. The colonies should be placed directly in the pear planting since otherwise the insects may avoid these flowers for more desirable bloom.

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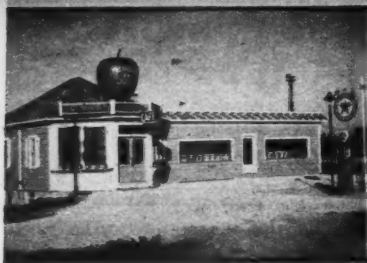
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MARKETING



SUPER-SALESMAN FOR KING APPLE

By WM. H. ZIPF

BEFORE W. W. Kercher realized a youthful ambition by establishing his own fruit farm 20 years ago, he operated a furniture store in Goshen, Ind. Time and again, while he attempted to move goods in his retail store, he saw how items well displayed drew customers.

So it was when his young orchard came into bearing that he set up a roadside market and for 16 years the apples and peaches from his 100-acre Sunrise Orchards have been displayed for a year-after-year steady stream of folks who came from nearby Goshen.

But Kercher noticed how the coming of cold weather in the fall would cut down trade at the market, and how winter weather in northern Indiana is often severe. After giving considerable thought to ways and means for keeping the retail trade, Kercher in 1934 had an idea which has since proved very profitable.

On regular shopping trips to town, Kercher noticed there always seemed to be an empty storeroom or two, right on Main Street. Why, he asked himself, couldn't he rent a storeroom for a few months each year and sell his fruit at a place to which folks could come on foot? He provided his own answer to the question by starting a retail salesroom in town. Subsequent business has firmly established the wisdom of the move.

Apples in the Sunrise Orchards city salesroom are attractively displayed in several kinds of containers. There are also eye-appealing window displays in which the experience of attracting buyers to quality fruit shows up. This fall, for instance, one window contained an attractive design, featuring a large "V" made of fancy apples.

"We try to have every kind of apple the folks here are likely to want," Kercher relates. "We know



Although W. W. Kercher has devoted his efforts to selling apples from his northern Indiana Sunrise Orchards, he's still concerned with the production of quality fruit. For without quality, he emphatically maintains, "all the selling in the world won't do any good."



An attractive exterior for his city salesroom is just as important as the sales-producing displays inside for W. W. Kercher, who here hangs a swinging sign over salesroom entrance to tell all within sight that here are an abundance of health-giving apples. Cider and apple butter are other winter items in this retail outlet, and peaches are offered in season.

quite well what their likes and dislikes are, and we're lucky to have most of the varieties they seem to want for eating, cooking, and other special uses. We store our fruit in the local cold storage and make a point of having fresh clean apples in the salesroom all the time."

Varieties regularly on sale at Kercher's city outlet include Starking, Turley, Golden Delicious, Northern Spy, Grimes, Baldwin, Rhode Island Greening, Rome, and Stayman. Cider, apple butter, and peaches are also sold in season.

Every container in the salesroom carries a printed triangle-shaped label, clearly indicating variety, price, size, and grade of the apples. Such identification makes for convenient shopping by busy homemakers and

permits rapid serving of customers by salesmen.

Kercher has marked up an accomplishment when it comes to retail selling of the fruit from his orchards. Through application of wise selling technique, he is realizing continuous development of a profitable, volume-moving market close to home. He is more certain than ever now that his idea for moving the salesroom to town in the fall is one of the best he has ever had. A handy place to buy choice fruit does much to make up for any loss of business at the roadside market due to current travel restrictions.

"Rationing—Why and How"—is the title of a recent booklet published by the OPA. Everyone should read it and then pass it on to his neighbor. To secure a copy, write the OPA, Washington, D. C.

NATIONWIDE NEWS

(Continued from page 6)

USE of rotenone is rigidly restricted by a new Federal order, the Agricultural Insecticide and Fungicide Association announces. The new order is an amendment to WPB Conservation Order M-133.

Rotenone insecticides now may be used only on certain crops against certain insects—and the user must certify the crop and the insect. Any reseller must certify the quantity and strength and that it will be legally used. The finished insecticide must not contain more than one-half of one per cent of rotenone. It must not contain any pyrethrum—another critically scarce insecticide.

Importers and processors are placed under special restrictions. Dealers must label or tag all packages sold—even old stocks—with a statement of the permitted uses. Everyone involved must preserve for two years complete records of all rotenone handled or used. Everyone who at the end of 1942 had more than 500 pounds of rotenone or 5000 pounds of rotenone insecticide must report to the War Production Board. Willful violation of any of these rules is made a Federal crime, punishable by fine or imprisonment.



REPRESENTATIVE Frank I. Giffin of Morrow County has introduced in the Ohio House of Representatives a bill providing for the creation of an Ohio State Apple Authority to promote the economic welfare of Ohio apple growers selling Ohio-grown apples in the domestic and other markets and to provide an educational and advertising program to acquaint the public with the value of apples as a food. The Authority is to be composed of five practical apple growers to be appointed by the Governor, with the Director of Agriculture and the Chief of the Bureau of Markets serving as ex-officio members. Heading the Authority are to be a manager and a secretary with such other employees, under civil service, as the Authority may see fit to employ.

One of the duties of the Authority, as provided in Representative Giffin's bill, is to "endeavor to protect the general public by educating it in reference to the various varieties and grades of Ohio apples, the time to use and consume each variety, and the uses to which each variety may be put."

MARCH, 1943

Our Duty for the Duration



Our President, as well as numerous Washington Officials and Executives, has publicly recognized the vital need for keeping motor trucks on the job. To this end, Service Men have been recently classified as essential war workers. Everyone in the General Motors Truck organization . . . Dealers, Service Managers, Parts Men, Mechanics . . . is responding to this responsibility with all the resources at his command. These men have at their disposal years of experience with Preventive Maintenance service, special truck knowledge and training and specialized truck equipment. Give your trucks the best service and they'll serve America better!

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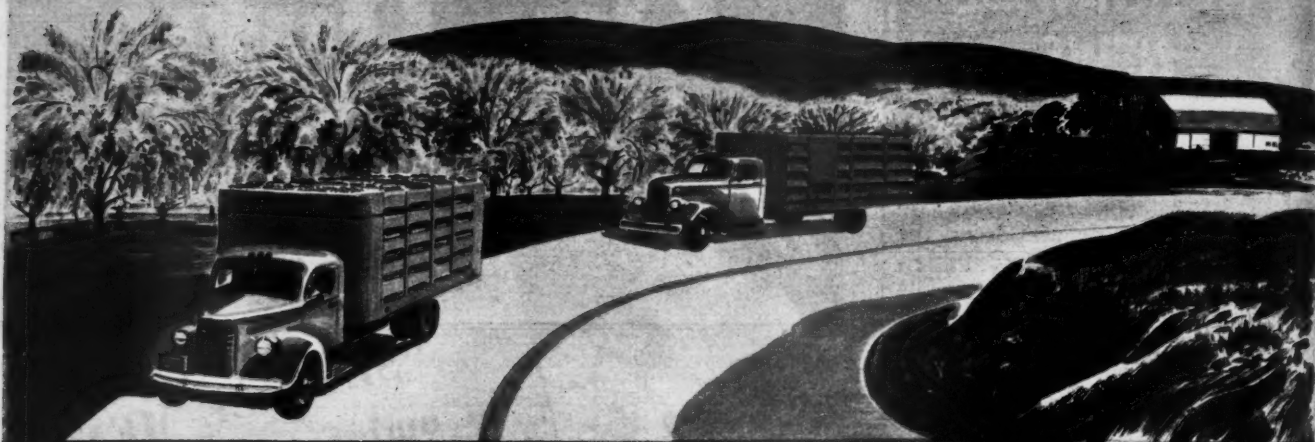
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AMERICAN FRUIT GROWER

GMC
VICTORY
MAINTENANCE

PAGE 31

FOR THE FOOD FRONT—MORE FRUIT!



**—and for the battle against Apple Scab
and Brown Rot**

IT'S DOW "MIKE" SULFUR

When it comes to top grade, all-out protection against apple scab, brown rot and similar infestations, Dow "Mike" Sulfur is the fungicide for your money. Here are some of the reasons why:

First—This instantly wettable sulfur, produced by an exclusive process, is of microscopic fineness. It is 15 times finer than 325 mesh sulfur. It goes into suspension speedily without the aid of an agitator.

Second—It produces a fog-like spray that completely blankets fruit and foliage—more thorough coverage than was ever before possible.

Third—Its toxicity is extremely high because it is more than 95% active sulfur.

Fourth—It has exceptional sticking properties that give trees extra protection. It will stick even through a heavy rain. In the case of peaches, sulfur particles penetrate the fuzz and deposit themselves on the skin of the fruit.

Fifth—"Mike" Sulfur is non-caustic, will not harm equipment, promotes the growth of foliage and is recommended for any spraying purpose for which sulfur is required.

DN-111 AND DN-Dust D-4 FOR RED MITES!

It's a good plan to beat the red mite to it. Take no chances on a summer build-up. Dow has two new and effective products for this purpose: a special spray, DN-111; and a special dust, DN-Dust D-4.

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